

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

ttctctgaca caaaccaaga aaaggtggtg attgtgagcc atcttcccat ttaccggac
 780
 gcctctgaca atgtgtgcct ggcttgaac tacagagatg ccctggcagt catttggctt
 840
 catgagtgtg tgggtgtgtt ctttgcgtggt cacacccatg atggtggcta ctctgaggat
 900
 ccttttggtg tataccacgt caacctagaa ggagttattg aaacagctcc agacagccaa
 960
 gcctttggca cagttcatgt ctatcctgac aaaatgatgt tgaaagggag aggcagagtt
 1020
 ccagatagaa ttatgaatta caagaaagaa agagccttcc attgttagtc taatttattt
 1080
 taacttgata gaaaatgagc tttgtgtttg tccctcctaa acaaaaaaat aaaaatcctc
 1140
 tgtctcattg tttagtattc agcttgcata acaaaatgta tttatagttt cagtgtgtga
 1200
 tggttgataa aatactcaga aatgttattt tggatcatgt atccattgta agttagaaac
 1260
 aaaccagggg ggaaactgag gcaggggtgt atagt
 1295

<210> 3392

<211> 355

<212> PRT

<213> Homo sapiens

<400> 3392

Ile	Val	Phe	Leu	Leu	Tyr	Leu	Glu	Thr	Cys	Leu	Glu	Val	Met	Asp	Asp	1	5	10	15
Lys	Pro	Asn	Pro	Glu	Ala	Leu	Ser	Asp	Ser	Ser	Glu	Arg	Leu	Phe	Ser	20	25	30	35
Phe	Gly	Val	Ile	Ala	Asp	Val	Gln	Phe	Ala	Asp	Leu	Glu	Asp	Gly	Phe	40	45	50	55
Asn	Phe	Gln	Gly	Thr	Arg	Arg	Arg	Tyr	Tyr	Arg	His	Ser	Leu	Leu	His	60	65	70	75
Leu	Gln	Gly	Ala	Ile	Glu	Asp	Trp	Asn	Asn	Glu	Ser	Ser	Met	Pro	Cys	80	85	90	95
Cys	Val	Leu	Gln	Leu	Gly	Asp	Ile	Ile	Asp	Gly	Tyr	Asn	Ala	Gln	Tyr	100	105	110	115
Asn	Ala	Ser	Lys	Lys	Ser	Leu	Glu	Leu	Val	Met	Asp	Met	Phe	Lys	Arg	120	125	130	135
Leu	Lys	Val	Pro	Val	His	His	Thr	Trp	Gly	Asn	His	Glu	Phe	Tyr	Asn	140	145	150	155
Phe	Ser	Arg	Glu	Tyr	Leu	Thr	His	Ser	Lys	Leu	Asn	Thr	Lys	Phe	Leu	160	165	170	175
Glu	Asp	Gln	Ile	Val	His	His	Pro	Glu	Thr	Met	Pro	Ser	Glu	Asp	Tyr	180	185	190	195
Tyr	Ala	Tyr	His	Phe	Val	Pro	Phe	Pro	Lys	Phe	Arg	Phe	Ile	Leu	Leu	200	205	210	215
Asp	Ala	Tyr	Asp	Leu	Ser	Val	Leu	Gly	Val	Asp	Gln	Ser	Ser	Pro	Lys	220	225	230	235
Tyr	Glu	Gln	Cys	Met	Lys	Ile	Leu	Arg	Glu	His	Asn	Pro	Asn	Thr	Glu	240	245	250	255
Leu	Asn	Ser	Pro	Gln	Gly	Leu	Ser	Glu	Pro	Gln	Phe	Val	Gln	Phe	Asn	260	265	270	275

210	215	220
Gly Gly Phe Ser Gln Glu Gln Leu Asn Trp Leu Asn Glu Val Leu Thr		
225	230	235
Phe Ser Asp Thr Asn Gln Glu Lys Val Val Ile Val Ser His Leu Pro		240
	245	250
Ile Tyr Pro Asp Ala Ser Asp Asn Val Cys Leu Ala Trp Asn Tyr Arg		255
	260	265
Asp Ala Leu Ala Val Ile Trp Ser His Glu Cys Val Val Cys Phe Phe		270
	275	280
Ala Gly His Thr His Asp Gly Gly Tyr Ser Glu Asp Pro Phe Gly Val		285
	290	295
Tyr His Val Asn Leu Glu Gly Val Ile Glu Thr Ala Pro Asp Ser Gln		300
305	310	315
Ala Phe Gly Thr Val His Val Tyr Pro Asp Lys Met Met Leu Lys Gly		320
	325	330
Arg Gly Arg Val Pro Asp Arg Ile Met Asn Tyr Lys Lys Glu Arg Ala		335
	340	345
Phe His Cys		350
355		

<210> 3393

<211> 510

<212> DNA

<213> Homo sapiens

<400> 3393

```

nngcgactct gggaccctt gggtcgtggc agcagtggcg gcgatgtttg tcggctcggg
60
atgggtccag ganntgttac tccttcttct tttgttgggg tctgggcagg ggccacagca
120
agtcggggcg ggtcaaaact cgagtacttg aaacggggagc actcgctgtc gaagccctac
180
cagggtgttg gcacaggcag ttcctcactg tggaatctga tgggcaatng catggtgatg
240
accagatata tccgccttac ccagatatg caaagtaaac aggggtgcctt gtggaaccgg
300
gtgccatggt tcctgagaga ctgggagttg caggtgcact tcaaaatcca tggacaagga
360
aagaagaatc tgcattggga tggcttggca atctgttaca caaaggatcg gatgcagcca
420
gggcctgtgt ttggaacat ggacaaattt gtggggctgg gaggatttgt agacacctac
480
cccaatgagg agaagcagcc cttcacgcgt
510

```

<210> 3394

<211> 170

<212> PRT

<213> Homo sapiens

<400> 3394

Xaa Arg Leu Trp Asp Pro Leu Gly Arg Gly Ser Ser Gly Gly Asp Val
1 5 10 15
Cys Arg Leu Gly Met Gly Pro Gly Xaa Val Thr Pro Ser Ser Phe Val

```
<210> 3395
<211> 807
<212> DNA
<213> Homo sapiens
```

2571

<210> 3396
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 3396
 Met Glu Ser Lys Pro Ser Arg Ile Pro Arg Arg Ile Ser Val Gln Pro
 1 5 10 15
 Ser Ser Ser Leu Ser Ala Arg Met Met Ser Gly Ser Arg Gly Ser Ser
 20 25 30
 Leu Asn Asp Thr Tyr His Ser Arg Asp Ser Ser Phe Arg Leu Asp Ser
 35 40 45
 Glu Tyr Gln Ser Thr Ser Ala Ser Ala Ser Ala Ser Pro Phe Gln Ser
 50 55 60
 Ala Trp Tyr Ser Glu Ser Glu Ile Thr Gln Gly Ala Arg Ser Arg Ser
 65 70 75 80
 Gln Asn Gln Gln Arg Asp His Asp Ser Lys Arg Pro Lys Leu Ser Cys
 85 90 95
 Thr Asn Cys Thr Thr Ser Ala Gly Arg Asn Val Gly Asn Gly Leu Asn
 100 105 110
 Thr Leu Ser Asp Ser Ser Trp Arg His Ser Gln Val Pro Arg Ser Ser
 115 120 125
 Ser Met Val Leu Gly Ser Phe Gly Thr Asp Leu Met Arg Glu Arg Arg
 130 135 140
 Asp Leu Glu Arg Arg Thr Asp Ser Ser Ile Ser Asn Leu Met Asp Tyr
 145 150 155 160
 Ser His Arg Ser Gly Asp Phe Thr Thr Ser Ser Tyr Val Gln Asp Arg
 165 170 175
 Val Pro Ser Tyr Ser Gln Gly Ala Arg Pro Lys Glu Asn Ser Met Ser
 180 185 190
 Thr Leu Gln Leu Asn Thr Ser Ser Thr Asn His Gln Leu
 195 200 205

<210> 3397
 <211> 492
 <212> DNA
 <213> Homo sapiens

<400> 3397
 ggcccagctt gccagggggc ccgggagagc agctacatgg agatgaaagg ccctccctca
 60
 ggatctcccc ccaggcagcc tcctcagttc tgggacagcc agaggcggcg gcaaccccag
 120
 ccacagagag acagtggcac ctacgagcag ccagccccc tgatccatga ccgagactct
 180
 gtgggctccc agccccctct gcctccgggc ctaccccccg gccactatga ctcacccaag
 240
 aacagccaca tccttgagca ttatgacttg cctccagtac ggcattcccc atcacctcan
 300
 cttcgacgcc aggatcggtg aggagccagg atggatggc agaggcagca anacctggct
 360
 gttgctgctc aaggctgggg acagagcata gtgtaccctt gccaggagca gggagtggac
 420

cggcaggctg tgaacatgaa caacgcttaa cagagcaagt gatgggagaa taattcatgg

480

cttctaccat gg

492

<210> 3398

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3398

Met Val Glu Ala Met Asn Tyr Ser Pro Ile Thr Cys Ser Val Lys Arg

1 5 10 15

Cys Ser Cys Ser Gln Pro Ala Gly Pro Leu Pro Ala Pro Gly Arg Gly

20 25 30

Thr Leu Cys Ser Val Pro Ser Leu Glu Gln Gln Gln Pro Gly Xaa Ala

35 40 45

Ala Ser Ala Ile Pro Ser Trp Leu Leu Asn Asp Pro Gly Val Glu Xaa

50 55 60

Glu Val Met Gly Asp Ala Val Leu Glu Ala Ser His Asn Val Gln Gly

65 70 75 80

Cys Gly Cys Ser Trp Val Ser His Ser Gly Arg Gly Val Gly Pro Glu

85 90 95

Ala Glu Gly Ala Gly Ser Pro Gln Ser Leu Gly His Gly Ser Gly Gly

100 105 110

Trp Ala Ala Arg Arg Cys His Cys Leu Ser Val Ala Gly Val Ala Ala

115 120 125

Ala Ser Gly Cys Pro Arg Thr Glu Glu Ala Ala Trp Gly Glu Ile Leu

130 135 140

Arg Glu Gly Leu Ser Ser Pro Cys Ser Cys Ser Pro Gly Pro Pro Gly

145 150 155 160

Lys Leu Gly

<210> 3399

<211> 5784

<212> DNA

<213> Homo sapiens

<400> 3399

nnatggaatc acagcggcag cggcggctgc ggcgcgcgcg agccgagtgt gagcggaaag

60

gggcccggcg tctgcctcga gactgaagac cgataaactc aagccatgga gggattactg

120

cattacatca accctgcaca cgccatttct ctcctaagtg ccttgaatga ggagcgtctc

180

aaaggacagc tgtgtgatgt gctgctgatt gttggagacc aaaagtccg agctcataaa

240

aacgtcttg ctagccagcag cgaatacttt cagagtttat tcacaaataa ggaaaatgag

300

tcacaaactg tatttcagct tgacttctgt gagccagatg cttttgataa tgttttaaac

360

tacatttatt cttcctctct atttgttgag aagagcagcc ttgctgctgt gcaagaactt

420

ggctatagtc ttgggatttc ctttctgact aacatcgttt ctaaacacc tcaagcccc
480
tttccaacgt gtcctaataag aaaaaaagtg tttgtagaag atgatgaaa cagttctcaa
540
aagagaagtg tcattgtttg tcaaagtaga aacgaagcac aaggaaaaac tgttagtcaa
600
aatcaaccog atgtaagcca tacttcccg cctctccta gcattgcagt caaggccaat
660
accaataagc cacatgtccc aaaaccaata gaaccacttc ataatttgtc attaactgaa
720
aagagttggc cgaaagatag ttctgtggta tatgcaaagt ctcttgagca ttctggatct
780
ttggatgac ctaatagaat cagtttggg aaaagaaatg cagtgttgcc ttcaaagcct
840
ctgcaagaca gagaagctat ggatgataaa ccaggtgtga gtggtcagct tccaaaagga
900
aaagctctag agctggcttt gaagagacca cgccacctg ttttgtctgt ttgtagctca
960
tcagagactc cctatctatt aaaagaaact aacaaaggaa atgggtcaagg tgaagataga
1020
aacttgttgt actattcaaa gttaggetta gtgatcccat ccagtggatc tggttcttga
1080
aaccaaagca ttgacaggag tggccactt gttaagagtc tctcagacg gtcattgtcg
1140
atggatagcc aggttctctgt ctattcacct tccatagatt tgaaatcttc ccagggatca
1200
tcttcggtgt ccagtgatgc accagggat gtgttgtgtg ctttatctca gaagtcctc
1260
ttaaaagatt gtagtgaata aacagcccta gatgacagc ctcaagtgt acaaccgcat
1320
cgctcaggt ccttttagtgc ttctcagtca acagacaggg agggagcttc cctgtgact
1380
gaggtgcgca taaagactga gccagcagc ccgctgtcgg acccctcgga catcatccg
1440
gtcactgtgg gagatgcggc aacaacagca gctgcctcat ctctgtcgg cacaagagac
1500
ctgtctctga aaacagaaga tgacaaaaa gacatgagca gactcccagc aaaaaggagg
1560
ttccaagcg accgaagatt gccgtttaag aagttaaagg tgaatgagca cgggtctcct
1620
gtgtcagaag ataattttga ggaaggctca agccctactc tcttgatgc agattttcca
1680
gattctgatt tgaataaaga cgaatttggg gagttggagg ggacgagacc aaacaaaaa
1740
tttaaatgca aacattgcct taagatcttt agatcaacag caggcttca ccgtcatggt
1800
aacatgtacc ataaccaga aaagccctac gcttgtgaca tctgtcaca gaggtttcac
1860
accaacttca aagtgtggac aactgtcag acccaacacg gcatagtgaa gaaccatca
1920
ccagcctcta gttcacatgc tgttttggat gaaaaattcc aaagaaagct gattgacata
1980
gtgagagaga gagaaattaa gaaggccctg atcattaagt taaggcggg caagcctggt
2040

tttcagggac agagtagctc ccaagcacag caagtcacac agaggaactt gagatctcga
2100
gccaaaggag cttacatttg tacttactgc ggaaaagcgt accgctttct ctctcaattt
2160
aagcagcata taaaaatgca tccaggagaa aaacccttg gagtaaataa agttgctaaa
2220
ccaaaagagc atgtctctct tgcaagtcca gtagaaaaca aggaggttta ccagtgcgcg
2280
ctctgtaatg ctaagctctc ttctctccta gagcaaggaa gccacgagcg gctgtgccgg
2340
aacgcggcgg tctgccctta ctgcagcctc aggtttttct cggccgagct gaagcaagaa
2400
cacgagagca agtgtgagta taagaagctg acctgcctcg agtgcagcg caccttcaag
2460
tcctctttca gcatctggcg gcaccaggtt gaagtccata atcagaacaa catggcaccc
2520
accgaaaact tttctttgcc cgttttgac cacaatggtg atgtgactgg ttcttcaagg
2580
ccccaatccc agcctgagcc caacaaagta aaccacatcg tcaccacaaa agacgacaac
2640
gtgttcagtg attcttcaga acaagttaac ttcgactcgg aagattcctc ttgtcttccc
2700
gaagacctta gtctttccaa gcaactgaaa atccaagtca aagaggagcc tgtggaggag
2760
gctgaagaag aggcaccgca ggccagcaca gccccaaag aagcgggtcc tagcaaagaa
2820
gccagcctgt ggccctgcga gaagtgtggg aagatgttca cggtgcataa gcagctggag
2880
cgtcaccagg agcttctgtg ctctgtgaaa ccatttattt gtcacgtgtg caacaaagct
2940
tttcgcacta attttcgact ctggagtcac ttccaatcgc acatgtctca ggcttcagag
3000
gaatcggcac ataaggaatc tgaggtgtgc cctgttccca caaactctcc ctctccacca
3060
cctctgccac cgccaccacc actgcccag atccagcctc tggagcctga cagcccaca
3120
ggcctgtccg aaaacccaac tccagccaca gaaaaactgt ttgtgcccc aagaatcagac
3180
accctttttt accatgcccc acccctttca gcaatcacat ttaaaagaca gtttatgtgt
3240
aaactttgcc acaggacatt caagactgca tttagtcttt ggagtcacga acaaacacac
3300
aattgaaaga ccaacacttt ttacctatgg gaggcagtc ccagatttca acctgaattg
3360
tgaaatgtgt cataagaaac aaaatatttt ttaacaaga ataataaagg ttggagattg
3420
ttacgcttga aattaagttg gaggcaaatt gataattact tagtaatgtc cttacttta
3480
gaaatacagc ttttaaaata ttgtggttct ggaccttaca agaacaagat ggtttgattt
3540
cattaatgtt gaaattggat tggctttgat tgtgtgcatg gttctcatt ccattggtgtc
3600
agtataatca ttaattgag gtttttgggt ttttattgat tagtggaata ctgtcgaagt
3660

attccttctt ttaattattt tagacacttg agttctagtt aaatcttaac catgttctta
3720
agtccaaaat aggaagaagt ggagtagttt gcagtattga tttatatctt agactacttt
3780
agcaataaaa gataaatctc aactttaata agttatcctg acacttgata aaaataaata
3840
tttggtattt tgtggctcatg taaaacttct ttttgtatga aaattgtgag aaatttaaat
3900
cagcaatagt aacacttaga tttttataaa ctaacaaaaa cttgctctca gtcaatataa
3960
taaagtatag ttaaactcta aggaagacct gggaaatgaa aacaatttat ggaagtcccc
4020
tacagtcagt ttataagggc ttcagtagtg atagacattg ttataaaaac ttgtaccatg
4080
ttacatgtac actgcaccac agtctaaatt cagaccagca tttgaaggac tgcacatatt
4140
tcatttcttc tgatttatgc tgtcacaat tgaaaatctg agtgtagtta ggacaaaaaa
4200
caaagctaac catatggcac taattttgat ttaacatta gtgtaacaaa taaggctcggg
4260
acatatattt acatagatcc cagacactca agaattagca cagctgatgt aaaattctaa
4320
attaccattt acttccagat agagcagagg agaaacacct cactgcagtt tcaacatgct
4380
ttccaagaac aatatatacg acatatacat ttctctgctt ctctcttggtg acaatttctg
4440
ttagaatttg ttgggggtct gatgggttaa atcatgggca aggccattct ctacatcatt
4500
gcttaatatt tcaaaaatag gtattagagc actatcagtg gtccaaaatt agtttttagct
4560
acttattttg ctccatgggt tttgggcttt tcaaagaata ctatgtataa tttgtaattg
4620
aaagcctttc agtaggatat ccaaagttca atgtgtttca aaagggaata cttttacttg
4680
tgggggtggg agtttagatg attaaaaaaa cgaaactaca aaatcctttt aagaaagtaa
4740
taccaattta gactctagtt tgtgttacga ggtattcttt caaatttttt ttaaaagcca
4800
actactgtca ttaagaaata attttagatt tgtgctctag cagaaaataa ctctgtaccc
4860
atcaatctta ttgccaacat tccataccag tggtaggaaa gatattctca ttttttttat
4920
tgaaccagac atttttataa aatactgatt gactttgtac attatggata ttatatatga
4980
aattttgctt tgtattcttt cacttgaaaa aactccaaaa ttccacaata ttttagtagt
5040
taacttctta ttctttctta aatttgatgg agaagggaata ataaattgca gttattgatt
5100
cttgccatct ttgtttcttt aaagaaatct atgcatttta aggataaaac taaagcatat
5160
gggtttacat gaaacatcag gatggattat tgtacattga attcattccg cgtataatgt
5220
ggtattttctt actctgtcca tcttggtagc tgtcacttca aaagaagaca gtttcctga
5280

gtaatcatca cctacatggc cattagagta tctatcgggtg ataattccat gatacagagt
 5340
 atcttggcat tataaattca gtatcccagg acctaaacct ttatgctaca ttttcgaaga
 5400
 ttttttaaaa ataattattgt taatcagtaa aaaaaaaaaa tttttttgat ctaaaccatag
 5460
 gttctgcata tctgttagat tttaaaaatg actggtggtt tgtcttcaca tttttgtcta
 5520
 agcaaggaat ataagatttc aaataaaaatt ttgaaccaa aacatttata atgccgttct
 5580
 ggtttttcta ttacttttta tactgtactt taaaagcatt aggctgaaag agtttatttt
 5640
 ggtggtcaaa aaaaaatgc ttccactcat gtaactattt taaatgttaa gtagtaaaat
 5700
 aatgaaagat atgttaatta ctttattcag taaagttttt taagaatgtt tatctcagcc
 5760
 agtaggcaaa tacttgggggt aaaa
 5784

<210> 3400

<211> 1069

<212> PRT

<213> Homo sapiens

<400> 3400

Thr	Gln	Ala	Met	Glu	Gly	Leu	Leu	His	Tyr	Ile	Asn	Pro	Ala	His	Ala
1				5				10					15		
Ile	Ser	Leu	Leu	Ser	Ala	Leu	Asn	Glu	Glu	Arg	Leu	Lys	Gly	Gln	Leu
		20					25					30			
Cys	Asp	Val	Leu	Leu	Ile	Val	Gly	Asp	Gln	Lys	Phe	Arg	Ala	His	Lys
		35				40					45				
Asn	Val	Leu	Ala	Ala	Ser	Ser	Glu	Tyr	Phe	Gln	Ser	Leu	Phe	Thr	Asn
	50					55					60				
Lys	Glu	Asn	Glu	Ser	Gln	Thr	Val	Phe	Gln	Leu	Asp	Phe	Cys	Glu	Pro
65					70					75				80	
Asp	Ala	Phe	Asp	Asn	Val	Leu	Asn	Tyr	Ile	Tyr	Ser	Ser	Ser	Leu	Phe
				85				90						95	
Val	Glu	Lys	Ser	Ser	Leu	Ala	Ala	Val	Gln	Glu	Leu	Gly	Tyr	Ser	Leu
		100						105					110		
Gly	Ile	Ser	Phe	Leu	Thr	Asn	Ile	Val	Ser	Lys	Thr	Pro	Gln	Ala	Pro
		115				120						125			
Phe	Pro	Thr	Cys	Pro	Asn	Arg	Lys	Lys	Val	Phe	Val	Glu	Asp	Asp	Glu
130					135						140				
Asn	Ser	Ser	Gln	Lys	Arg	Ser	Val	Ile	Val	Cys	Gln	Ser	Arg	Asn	Glu
145				150						155				160	
Ala	Gln	Gly	Lys	Thr	Val	Ser	Gln	Asn	Gln	Pro	Asp	Val	Ser	His	Thr
				165				170						175	
Ser	Arg	Pro	Ser	Pro	Ser	Ile	Ala	Val	Lys	Ala	Asn	Thr	Asn	Lys	Pro
		180						185					190		
His	Val	Pro	Lys	Pro	Ile	Glu	Pro	Leu	His	Asn	Leu	Ser	Leu	Thr	Glu
		195				200						205			
Lys	Ser	Trp	Pro	Lys	Asp	Ser	Ser	Val	Val	Tyr	Ala	Lys	Ser	Leu	Glu
210					215						220				
His	Ser	Gly	Ser	Leu	Asp	Asp	Pro	Asn	Arg	Ile	Ser	Leu	Val	Lys	Arg

```

225          230          235          240
Asn Ala Val Leu Pro Ser Lys Pro Leu Gln Asp Arg Glu Ala Met Asp
          245          250          255
Asp Lys Pro Gly Val Ser Gly Gln Leu Pro Lys Gly Lys Ala Leu Glu
          260          265          270
Leu Ala Leu Lys Arg Pro Arg Pro Pro Val Leu Ser Val Cys Ser Ser
          275          280          285
Ser Glu Thr Pro Tyr Leu Leu Lys Glu Thr Asn Lys Gly Asn Gly Gln
          290          295          300
Gly Glu Asp Arg Asn Leu Leu Tyr Tyr Ser Lys Leu Gly Leu Val Ile
305          310          315          320
Pro Ser Ser Gly Ser Gly Ser Gly Asn Gln Ser Ile Asp Arg Ser Gly
          325          330          335
Pro Leu Val Lys Ser Leu Leu Arg Arg Ser Leu Ser Met Asp Ser Gln
          340          345          350
Val Pro Val Tyr Ser Pro Ser Ile Asp Leu Lys Ser Ser Gln Gly Ser
          355          360          365
Ser Ser Val Ser Ser Asp Ala Pro Gly Asn Val Leu Cys Ala Leu Ser
          370          375          380
Gln Lys Ser Ser Leu Lys Asp Cys Ser Glu Lys Thr Ala Leu Asp Asp
385          390          395          400
Arg Pro Gln Val Leu Gln Pro His Arg Leu Arg Ser Phe Ser Ala Ser
          405          410          415
Gln Ser Thr Asp Arg Glu Gly Ala Ser Pro Val Thr Glu Val Arg Ile
          420          425          430
Lys Thr Glu Pro Ser Ser Pro Leu Ser Asp Pro Ser Asp Ile Ile Arg
          435          440          445
Val Thr Val Gly Asp Ala Ala Thr Thr Ala Ala Ala Ser Ser Ser Ser
          450          455          460
Val Thr Arg Asp Leu Ser Leu Lys Thr Glu Asp Asp Gln Lys Asp Met
465          470          475          480
Ser Arg Leu Pro Ala Lys Arg Arg Phe Gln Ala Asp Arg Arg Leu Pro
          485          490          495
Phe Lys Lys Leu Lys Val Asn Glu His Gly Ser Pro Val Ser Glu Asp
          500          505          510
Asn Phe Glu Glu Gly Ser Ser Pro Thr Leu Leu Asp Ala Asp Phe Pro
          515          520          525
Asp Ser Asp Leu Asn Lys Asp Glu Phe Gly Glu Leu Glu Gly Thr Arg
          530          535          540
Pro Asn Lys Lys Phe Lys Cys Lys His Cys Leu Lys Ile Phe Arg Ser
545          550          555          560
Thr Ala Gly Leu His Arg His Val Asn Met Tyr His Asn Pro Glu Lys
          565          570          575
Pro Tyr Ala Cys Asp Ile Cys His Lys Arg Phe His Thr Asn Phe Lys
          580          585          590
Val Trp Thr His Cys Gln Thr Gln His Gly Ile Val Lys Asn Pro Ser
          595          600          605
Pro Ala Ser Ser Ser His Ala Val Leu Asp Glu Lys Phe Gln Arg Lys
          610          615          620
Leu Ile Asp Ile Val Arg Glu Arg Glu Ile Lys Lys Ala Leu Ile Ile
625          630          635          640
Lys Leu Arg Arg Gly Lys Pro Gly Phe Gln Gly Gln Ser Ser Ser Gln
          645          650          655
Ala Gln Gln Val Ile Lys Arg Asn Leu Arg Ser Arg Ala Lys Gly Ala

```

```

        660              665              670
Tyr Ile Cys Thr Tyr Cys Gly Lys Ala Tyr Arg Phe Leu Ser Gln Phe
    675              680              685
Lys Gln His Ile Lys Met His Pro Gly Glu Lys Pro Leu Gly Val Asn
    690              695              700
Lys Val Ala Lys Pro Lys Glu His Ala Pro Leu Ala Ser Pro Val Glu
    705              710              715              720
Asn Lys Glu Val Tyr Gln Cys Arg Leu Cys Asn Ala Lys Leu Ser Ser
    725              730              735
Leu Leu Glu Gln Gly Ser His Glu Arg Leu Cys Arg Asn Ala Ala Val
    740              745              750
Cys Pro Tyr Cys Ser Leu Arg Phe Phe Ser Pro Glu Leu Lys Gln Glu
    755              760              765
His Glu Ser Lys Cys Glu Tyr Lys Lys Leu Thr Cys Leu Glu Cys Met
    770              775              780
Arg Thr Phe Lys Ser Ser Phe Ser Ile Trp Arg His Gln Val Glu Val
    785              790              795              800
His Asn Gln Asn Asn Met Ala Pro Thr Glu Asn Phe Ser Leu Pro Val
    805              810              815
Leu Asp His Asn Gly Asp Val Thr Gly Ser Ser Arg Pro Gln Ser Gln
    820              825              830
Pro Glu Pro Asn Lys Val Asn His Ile Val Thr Thr Lys Asp Asp Asn
    835              840              845
Val Phe Ser Asp Ser Ser Glu Gln Val Asn Phe Asp Ser Glu Asp Ser
    850              855              860
Ser Cys Leu Pro Glu Asp Leu Ser Leu Ser Lys Gln Leu Lys Ile Gln
    865              870              875              880
Val Lys Glu Glu Pro Val Glu Glu Ala Glu Glu Glu Ala Pro Glu Ala
    885              890              895
Ser Thr Ala Pro Lys Glu Ala Gly Pro Ser Lys Glu Ala Ser Leu Trp
    900              905              910
Pro Cys Glu Lys Cys Gly Lys Met Phe Thr Val His Lys Gln Leu Glu
    915              920              925
Arg His Gln Glu Leu Leu Cys Ser Val Lys Pro Phe Ile Cys His Val
    930              935              940
Cys Asn Lys Ala Phe Arg Thr Asn Phe Arg Leu Trp Ser His Phe Gln
    945              950              955              960
Ser His Met Ser Gln Ala Ser Glu Glu Ser Ala His Lys Glu Ser Glu
    965              970              975
Val Cys Pro Val Pro Thr Asn Ser Pro Ser Pro Pro Pro Leu Pro Pro
    980              985              990
Pro Pro Pro Leu Pro Lys Ile Gln Pro Leu Glu Pro Asp Ser Pro Thr
    995              1000              1005
Gly Leu Ser Glu Asn Pro Thr Pro Ala Thr Glu Lys Leu Phe Val Pro
    1010              1015              1020
Gln Glu Ser Asp Thr Leu Phe Tyr His Ala Pro Pro Leu Ser Ala Ile
    1025              1030              1035              1040
Thr Phe Lys Arg Gln Phe Met Cys Lys Leu Cys His Arg Thr Phe Lys
    1045              1050              1055
Thr Ala Phe Ser Leu Trp Ser His Glu Gln Thr His Asn
    1060              1065

```

<210> 3401

<211> 579

<212> DNA

<213> Homo sapiens

<400> 3401

gttgaaaata aggaaaagga cagcaatatg ccacactttc aaactttgca agctattgtt
 60
 tctcacttcc aaaagttatt tgatgtgcct tctttaaatg gagtctatcc ccgaatgaat
 120
 gaagtttata ctaggcttgg agaaatgaac aatgctgtga gaaacctcca agaactctta
 180
 gaattagata gttcatcttc attgtgtgtg ctagtaagca ctggttgaaa actctgtagg
 240
 ctgattaatg aagatgtgaa tgagcaggtt atgcaggat taggacctga agacctccag
 300
 agcattatct acaaattgga agaacacgag gaatttttcc cagcatttca ggcatttact
 360
 aatgatctac ttgaaatcctt agaaattgat gactctggat gccattgtac ctgcagtaaa
 420
 gaaattaaaa gtactttcat actgaaaaca aatcaaatca tttttactgt gtaaattgta
 480
 ttcttaacat tttgtatttt gtaggattga tcttattttg agacaagggt tgtaaaatgt
 540
 atttgtcttc agaattcacc cctttcttag tattaggtc
 579

<210> 3402

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3402

Met	Pro	His	Phe	Gln	Thr	Leu	Gln	Ala	Ile	Val	Ser	His	Phe	Gln	Lys
1				5					10					15	
Leu	Phe	Asp	Val	Pro	Ser	Leu	Asn	Gly	Val	Tyr	Pro	Arg	Met	Asn	Glu
		20						25					30		
Val	Tyr	Thr	Arg	Leu	Gly	Glu	Met	Asn	Asn	Ala	Val	Arg	Asn	Leu	Gln
		35				40						45			
Glu	Leu	Leu	Glu	Leu	Asp	Ser	Ser	Ser	Ser	Leu	Cys	Val	Leu	Val	Ser
	50				55						60				
Thr	Val	Gly	Lys	Leu	Cys	Arg	Leu	Ile	Asn	Glu	Asp	Val	Asn	Glu	Gln
65					70					75				80	
Val	Met	Gln	Val	Leu	Gly	Pro	Glu	Asp	Leu	Gln	Ser	Ile	Ile	Tyr	Lys
			85					90						95	
Leu	Glu	Glu	His	Glu	Glu	Phe	Phe	Pro	Ala	Phe	Gln	Ala	Phe	Thr	Asn
			100					105					110		
Asp	Leu	Leu	Glu	Ile	Leu	Glu	Ile	Asp	Asp	Ser	Gly	Cys	His	Cys	Thr
		115				120					125				
Cys	Ser	Lys	Glu	Ile	Lys	Ser	Thr	Phe	Ile	Leu	Lys	Thr	Asn	Gln	Ile
	130					135					140				
Ile	Phe	Thr	Val												
145															

<210> 3403

<211> 1696

<212> DNA

<213> Homo sapiens

<400> 3403

aaaaacatca gtgtctgtgg gtagttagaa tcttcagttc ctgtgagcgt cggcgtcttc
60
tgggcctgtg gagtttcttg gacagggggc gcggggctcc aggacggcgc ccttagcgac
120
accatggccc gaaatgcaga aaaggccatg acggccttag caagatttcg ccaggctcag
180
ctggaagagg gaaaagtga ggaacgaaga ccctttcttg cctcagaatg tactgaactg
240
cctaaagctg agaagtggag acgacagatc attggagaga tctctaaaaa agtggctcag
300
attcagaatg ctggtttagg tgaatttcga attcgtgacc tgaatgatga aattaacaag
360
ctgctaaggg agaaaggaca ctgggaggtc cggataaagg agctgggagg tcctgattat
420
ggaaaagtgt gccctaaaat gctggatcat gaaggaaaag aagtcccagg aaaccgaggt
480
tacaagtact ttggagcagc aaaagatttg cctggtgtta gagagctgtt tgaaaaanga
540
acctcttcct cctcccagnn aaagacacgt gctgagctca tgaaggcaat cgattttgag
600
tactatgggt acctagatga agatgatggg gttattgtgc ctttgaaca ggaatatgaa
660
aagaaactca gagccgagtt agtggaaaag tggaaagcag agagagaggc tcggctggca
720
agaggagaaa aggaagagga ggaggaagag gaggaagaga tcaacatcta tgcagtcacc
780
gaggaggagt cggacgagga aggcagccag gagaaggag gggacgacag ccagcagaag
840
ttcattgtct acgtccctgt tccctcgag caagagattg aggaggcact ggtgcgaagg
900
aagaaaatgg aactcctcca gaagtatgca agcgagacc tcgaggccca aagtgaagaa
960
gccagaaggc tcctggggta ttaggaccca gctggggctc tccttgaggt tcttccatcc
1020
cccagtggta cctcaggacc cagggctgca gacacaggct ggtgctgcaa gggctcctgc
1080
cccattctca gccttccttc cctctccttg tctcatgttg accggagggt aggggtctgt
1140
ccctgggtct cctggtaggt tttgtacaca tattttgcta ctgtgtggat ccatttattt
1200
ttattgtgga gtgtatacaa caggttgca actggctgcc tgtgtcttat tttgacttgc
1260
actgccattt tgaggggaga agaataaatt agtggcaaac atttaaaaat gcaatttttt
1320
gcagaccaa gtataatttt aaaaaatgca aattttctaa aagacacatc tcttgaaaaa
1380
tgagatgatg tggccaggcg cagtggctca cgctgtaac ccagcactt tgggaggccg
1440
aggcgggagg gtcacgaggt caagagatgg agaccatcct ggccaacatg gtgaaacccc
1500

atgtctacta aaaatacaaa aaaattagct gggcgtagct gcatgcacct gtagtcccag
 1560
 ctgctttggg aggctgaggg aggagaatca cttgaacccc cggaggtgga ggtttgagtg
 1620
 agcccagatc gtggccattg actccaagcc ttgggacaag tgggaacctc ttccccccaa
 1680
 aaaaaaaaaa aagttt
 1696

<210> 3404

<211> 286

<212> PRT

<213> Homo sapiens

<400> 3404

Met	Ala	Arg	Asn	Ala	Glu	Lys	Ala	Met	Thr	Ala	Leu	Ala	Arg	Phe	Arg
1			5					10					15		
Gln	Ala	Gln	Leu	Glu	Glu	Gly	Lys	Val	Lys	Glu	Arg	Arg	Pro	Phe	Leu
		20					25						30		
Ala	Ser	Glu	Cys	Thr	Glu	Leu	Pro	Lys	Ala	Glu	Lys	Trp	Arg	Arg	Gln
	35						40					45			
Ile	Ile	Gly	Glu	Ile	Ser	Lys	Lys	Val	Ala	Gln	Ile	Gln	Asn	Ala	Gly
	50					55				60					
Leu	Gly	Glu	Phe	Arg	Ile	Arg	Asp	Leu	Asn	Asp	Glu	Ile	Asn	Lys	Leu
65					70					75				80	
Leu	Arg	Glu	Lys	Gly	His	Trp	Glu	Val	Arg	Ile	Lys	Glu	Leu	Gly	Gly
			85					90					95		
Pro	Asp	Tyr	Gly	Lys	Val	Gly	Pro	Lys	Met	Leu	Asp	His	Glu	Gly	Lys
		100						105					110		
Glu	Val	Pro	Gly	Asn	Arg	Gly	Tyr	Lys	Tyr	Phe	Gly	Ala	Ala	Lys	Asp
	115					120					125				
Leu	Pro	Gly	Val	Arg	Glu	Leu	Phe	Glu	Lys	Xaa	Thr	Ser	Ser	Ser	Ser
	130					135					140				
Gln	Xaa	Lys	Thr	Arg	Ala	Glu	Leu	Met	Lys	Ala	Ile	Asp	Phe	Glu	Tyr
145					150					155					160
Tyr	Gly	Tyr	Leu	Asp	Glu	Asp	Asp	Gly	Val	Ile	Val	Pro	Leu	Glu	Gln
			165					170						175	
Glu	Tyr	Glu	Lys	Lys	Leu	Arg	Ala	Glu	Leu	Val	Glu	Lys	Trp	Lys	Ala
	180							185					190		
Glu	Arg	Glu	Ala	Arg	Leu	Ala	Arg	Gly	Glu	Lys	Glu	Glu	Glu	Glu	Glu
	195						200					205			
Glu	Glu	Glu	Glu	Ile	Asn	Ile	Tyr	Ala	Val	Thr	Glu	Glu	Glu	Ser	Asp
	210					215					220				
Glu	Glu	Gly	Ser	Gln	Glu	Lys	Gly	Gly	Asp	Asp	Ser	Gln	Gln	Lys	Phe
225				230						235					240
Ile	Ala	His	Val	Pro	Val	Pro	Ser	Gln	Gln	Glu	Ile	Glu	Glu	Ala	Leu
			245					250						255	
Val	Arg	Arg	Lys	Lys	Met	Glu	Leu	Leu	Gln	Lys	Tyr	Ala	Ser	Glu	Thr
		260						265					270		
Leu	Gln	Ala	Gln	Ser	Glu	Glu	Ala	Arg	Arg	Leu	Leu	Gly	Tyr		
	275						280					285			

<210> 3405

<211> 402

<212> DNA

<213> Homo sapiens

<400> 3405

```

gggtgggagg ccccttgca ggagaggctg gcgttctatc agacagcaat tgaaagcgcc
60
agacaagctg gagacagcgc caagatgcgg cgctacgacg gggggcttaa aacactggaa
120
aacctgctcg cctccatccg taagggaat gccattgacg aagcggacat cccgccgcca
180
gtggccatag gaaaaggccc ggcgccacg cctacctaca gccctgcacc caccagccg
240
gccctagaa tcgcgtcagc cccagagccc agggtcaccc tggagggacc ttctgccacc
300
gcccagcct catctccagg cttggctaag cccagatgc cccaggtcc ctgcagccct
360
ccctctggcc cagttgcaga gccgccagcg cgactacaag ct
402

```

<210> 3406

<211> 134

<212> PRT

<213> Homo sapiens

<400> 3406

```

Gly Trp Glu Ala Pro Leu Gln Glu Arg Leu Ala Phe Tyr Gln Thr Ala
1      5      10      15
Ile Glu Ser Ala Arg Gln Ala Gly Asp Ser Ala Lys Met Arg Arg Tyr
20     25     30
Asp Arg Gly Leu Lys Thr Leu Glu Asn Leu Leu Ala Ser Ile Arg Lys
35     40     45
Gly Asn Ala Ile Asp Glu Ala Asp Ile Pro Pro Pro Val Ala Ile Gly
50     55     60
Lys Gly Pro Ala Ser Thr Pro Thr Tyr Ser Pro Ala Pro Thr Gln Pro
65     70     75     80
Ala Pro Arg Ile Ala Ser Ala Pro Glu Pro Arg Val Thr Leu Glu Gly
85     90     95
Pro Ser Ala Thr Ala Pro Ala Ser Ser Pro Gly Leu Ala Lys Pro Gln
100    105    110
Met Pro Pro Gly Pro Cys Ser Pro Pro Ser Gly Pro Val Ala Glu Pro
115    120    125
Pro Ala Arg Leu Gln Ala
130

```

<210> 3407

<211> 535

<212> DNA

<213> Homo sapiens

<400> 3407

```

ggaatgaggg gggatgggga agaaccccc aggacagcac caagcaggtc tgcggggacc
60
tttcccgac accatgcctt ctccggcgtg aggcaggtgg cggcaccgac aggcccgggg
120

```

gggacctttc ccggacaccc aacctcctcg gtggcgaggc aggtggcggc accgacaggc
 180
 ccggcgggga cctttcccg ancacctggc ctcttgga agcagggtggc ggcaccaaca
 240
 ggcccggggg ggacctttcc cggacacctg gcctcctcgg cgaggcaggt ggcagaactg
 300
 gttccacgtc tgatcttctt tagacaaacc tgccttcaga ggaaattgtg ttcaactgga
 360
 gaaactggaa aatgtactag atattggctg atatgaagga tatatgtttt aagtatgata
 420
 attcgatttt ggctctgtag ggaaaggctc ttatttttaa aagatgtgca ctagagaaaa
 480
 aggaaacagc atgtagcaaa tacatccacg gatgtctctc tggtttaaaa aaaaa
 535

<210> 3408

<211> 131

<212> PRT

<213> Homo sapiens

<400> 3408

Gly	Met	Arg	Gly	Asp	Gly	Glu	Glu	Pro	Pro	Arg	Thr	Ala	Pro	Ser	Arg
1			5						10					15	
Ser	Ala	Gly	Thr	Phe	Pro	Gly	His	His	Ala	Phe	Ser	Ala	Val	Arg	Gln
		20					25					30			
Val	Ala	Ala	Pro	Thr	Gly	Pro	Gly	Gly	Thr	Phe	Pro	Gly	His	Pro	Thr
		35				40				45					
Ser	Ser	Val	Ala	Arg	Gln	Val	Ala	Ala	Pro	Thr	Gly	Pro	Ala	Gly	Thr
	50				55					60					
Phe	Pro	Gly	Xaa	Pro	Gly	Leu	Leu	Gly	Lys	Gln	Val	Ala	Ala	Pro	Thr
65				70					75					80	
Gly	Pro	Gly	Gly	Thr	Phe	Pro	Gly	His	Leu	Ala	Ser	Ser	Ala	Arg	Gln
			85					90						95	
Val	Ala	Glu	Leu	Val	Pro	Arg	Leu	Ile	Phe	Leu	Arg	Gln	Thr	Cys	Leu
		100					105						110		
Gln	Arg	Lys	Leu	Cys	Ser	Thr	Gly	Glu	Thr	Gly	Lys	Cys	Thr	Arg	Tyr
		115					120					125			
Trp	Leu	Ile													
		130													

<210> 3409

<211> 959

<212> DNA

<213> Homo sapiens

<400> 3409

nagatctccg aggacaccgg acgggagcgc ttggccatcc tctctccggc agaggagcag
 60
 acgtttgctt tccaagtgca aaactacaga cacgcgcgcg cacacacgca agcacacgcg
 120
 gagagagagg aaccttgccg gtccgaggca gctctgcgcg tccccctctg cgcttagcat
 180
 cctcggccca gcgcggcccc caccgccatg gaggtgctgg agagcgggga gcagggcgctg
 240

ctgcagtggg accgcaagct gagcgagctg tcagagcccg gggacggcga ggcctcatg
 300
 taccacacgc acttctcaga acttctggat gagttttccc agaacgtctt gggtcagctc
 360
 ctgaatgatc ctttcctctc agagaagagt gtgtcaatgg aggtggaacc ttccccgacg
 420
 tccccggcgc ctctcatcca ggctgagcac agctactccc tgtgagagga gcctcggggc
 480
 cagtcgccct tcaccacat taccaccagt gacagcttca atgacgatga ggtggaaagt
 540
 nngagaaatg gtacctgtct acagacttcc cttcaacatc catcaagaca gagccagtta
 600
 cagacgaacc acccccagga ctcgttccgt ctgtcactct gaccatcaca gccatctcca
 660
 ccncggttg aaaaggagga acctcctctg gaaatgaaca ctggggttga ttcctcgtgc
 720
 cagaccatta ttcctaaat taagctggag cctcatgaag tggatcagtt tctaaacttc
 780
 tctcctaaag aaggctgtgc tngccctccc tgtgtccctt tgggttatgg atatggtctc
 840
 tgggtctaca gagagggaat atggcgagag agctgggatg agtttgtacc acagatggtg
 900
 tagctggctt tatgaaatag ctctgttctt aaaaaataaa aattttgctt ccaaataaa
 959

<210> 3410

<211> 144

<212> PRT

<213> Homo sapiens

<400> 3410

Met	Glu	Val	Leu	Glu	Ser	Gly	Glu	Gln	Gly	Val	Leu	Gln	Trp	Asp	Arg
1				5					10					15	
Lys	Leu	Ser	Glu	Leu	Ser	Glu	Pro	Gly	Asp	Gly	Glu	Ala	Leu	Met	Tyr
			20					25					30		
His	Thr	His	Phe	Ser	Glu	Leu	Leu	Asp	Glu	Phe	Ser	Gln	Asn	Val	Leu
		35					40					45			
Gly	Gln	Leu	Leu	Asn	Asp	Pro	Phe	Leu	Ser	Glu	Lys	Ser	Val	Ser	Met
		50			55						60				
Glu	Val	Glu	Pro	Ser	Pro	Thr	Ser	Pro	Ala	Pro	Leu	Ile	Gln	Ala	Glu
					70					75				80	
His	Ser	Tyr	Ser	Leu	Cys	Glu	Glu	Pro	Arg	Ala	Gln	Ser	Pro	Phe	Thr
				85				90						95	
His	Ile	Thr	Thr	Ser	Asp	Ser	Phe	Asn	Asp	Asp	Glu	Val	Glu	Ser	Xaa
			100					105					110		
Arg	Asn	Gly	Thr	Cys	Leu	Gln	Thr	Ser	Leu	Gln	His	Pro	Ser	Arg	Gln
		115					120					125			
Ser	Gln	Leu	Gln	Thr	Asn	His	Pro	Gln	Asp	Ser	Phe	Arg	Leu	Ser	Leu
		130				135						140			

<210> 3411

<211> 958

<212> DNA

<213> Homo sapiens

<400> 3411
 nngcgcgccg gttttgttgt tattgcgagg gggtcgcggg ggggcggggc agtgaccccg
 60
 ggccggccgt tgtgccctca tccctccac ccttccttcg tatagcttcc tttctctca
 120
 cgacggcctc cacagtcggg agcccgccgg agcccgacc tggcggggag agctgcctcc
 180
 acggccgggc acccagaccc caccgtcgca gtcgccacca cctcagtcga tcttggtac
 240
 cggcaatggg cttcgtatcc tccagtgcac ttgtaactga cttggacacg gaataactaag
 300
 aactcacttc tgtcctcatc ccagtcgcgc cggcgggtgac catctcggct cttttgggct
 360
 taactgccgc tctctcggac tctgtctgac tttgggggca ccatggacca aagtgggatg
 420
 gagattcctg tgacctcat cattaagca ccgaatcaga aatacagtga ccagactatt
 480
 agctgcttct tgaactggac cgtggggaaa ctaaaaacgc atctatctaa cgtttaccct
 540
 agcaaacat tgacgaagga tcagagattg gtgtattcgg gcagactgct tcccgatcat
 600
 ctgcagctga aagacattct cagaaaacaa gatgagtatc atatggttca tctagtatgt
 660
 acttctcggg ctcctcccag ttctccaaaa tccagacca atagagaaag tcatgaagca
 720
 ttggcatcca gcagcaattc tagttcagat cattcaggat caacaactcc atcatctggt
 780
 caagaaacct tgtcttttagc tgtgggttct tctcagaag gattgaggca gcgtaccctt
 840
 ccacaagcac aaactgacca agcacagagt caccagtttc catatgtaat gcaaggaaat
 900
 gtagacaacc aatttcctgg gcaagctgct ccacctggat tccagtgta tcccgcg
 958

<210> 3412

<211> 185

<212> PRT

<213> Homo sapiens

<400> 3412

Met	Asp	Gln	Ser	Gly	Met	Glu	Ile	Pro	Val	Thr	Leu	Ile	Ile	Lys	Ala
1				5					10					15	
Pro	Asn	Gln	Lys	Tyr	Ser	Asp	Gln	Thr	Ile	Ser	Cys	Phe	Leu	Asn	Trp
			20					25					30		
Thr	Val	Gly	Lys	Leu	Lys	Thr	His	Leu	Ser	Asn	Val	Tyr	Pro	Ser	Lys
			35				40					45			
Pro	Leu	Thr	Lys	Asp	Gln	Arg	Leu	Val	Tyr	Ser	Gly	Arg	Leu	Leu	Pro
			50			55				60					
Asp	His	Leu	Gln	Leu	Lys	Asp	Ile	Leu	Arg	Lys	Gln	Asp	Glu	Tyr	His
65					70				75					80	
Met	Val	His	Leu	Val	Cys	Thr	Ser	Arg	Thr	Pro	Pro	Ser	Ser	Pro	Lys
					85				90					95	
Ser	Ser	Thr	Asn	Arg	Glu	Ser	His	Glu	Ala	Leu	Ala	Ser	Ser	Ser	Asn

ttttcaaaat ttcactctac aaacaacctc accacgaact gttgtgagaa ctgtgggagc
1140
tattgtctata gtagctctgg tccttgccaa tcccagaagg tttttagttc aacaagtgtc
1200
acggcataca agcagaattc tgcccaaatt cctccatatg ccttggggaa gtcattgaga
1260
tcctcagcag aaatgattga aaataccaat agcttgggga agacagagct tttctgttct
1320
attaattgct tatctgttta cagagttaag actgttactt ctgcaggtgt ccaggtttca
1380
tgtcatagtt gtaaaacctc agcaatccct cagtatcacc tagccatgtc agatggaact
1440
atatacagct tctgcagctc cagttgtgtg gttgctttcc agaattgtatt tagcaagcca
1500
aaaggaacaa actcttcggc ggtgccccctg tctcagggcc aagtggttgt aagcccggcc
1560
tcctccaggt cagcagtgtc aataggagga ggtaaacctc ctgccgtttc cccagctcc
1620
atccgtggct ctgctgcagc cagcctccaa cctcttgggtg aacaatccca gcaagttgct
1680
ttaaccata cagttgttaa actcaagtgt cagcactgta accatctatt tgccacaaaa
1740
ccagaacttc ttttttaciaa gggtaaaatg tttctgtttt gtggcaagaa ttgctctgat
1800
gaatacaaga agaaaaataa agttgtggca atgtgtgaat attgtaaaat tgagaaaatt
1860
gtaaaaggaga ctgttcgggt ctcaggtgct gacaagtcat tctgtagtga aggttgcaaa
1920
ttgctttata aacatgactt ggcaaaacgc tggggaaatc actgcaaaat gtgcagctac
1980
tgttcacaga catccccaaa tttggtacag aatcgattgg agggcaagtt agaagagttt
2040
tgttgtgaag attgtatgtc caaatttaca gttctgtttt atcagatggc caagtgtgat
2100
ggttgtaaac gacagggtaa actaagcgag tccataaagt ggcgaggcaa cattaaacat
2160
ttctgtaacc tattttgtgt cttggagttt tgtcatcagc aaattatgaa tgactgtctt
2220
ccacaaaata aagtaaatac ttctaaagca aaaactgctg tgacggagct cccttctgca
2280
aggacagata caacaccagt tataaccagt gtgatgtcat tggcaaaaat acctgctacc
2340
ttatctacag ggaacactaa cagtgtttta aaaggtgcag ttactaaaga ggcagcaaa
2400
atcattcaag atgaaagtac acaggaagat gctatgaaat ttccatcttc ccaatcttcc
2460
cagccttcca ggcttttaaa gaacaaaggc atatcatgca aaccggtcac acagaccaag
2520
gccacttctt gcaaaccaca tacacagcac aaagaatgtc agacagaatg ccctgttcgt
2580
gcagtttgcg gaggtgttcc cgctgaaggc atttggtctc cagccagatc ccctgaacta
2640
ccaaatagct gtgggctttc tggaaactgct ggctgggttg ctgctgggtc tgggcccacc
2700

gatgctgcaa gagatcagta acttgttctt gattctgctc atgatggggg ctatcttcac
 2760
 cttggcagct ctgaaagagt cactaagcac ctgtatccca gccattgtct gcctgggggt
 2820
 cctgctgctg ctgaatgtcg gccagctctt agcccagact aagaagggtg tcagaccac
 2880
 taggaagaag actctaagta cattcaagga atcctggaag tagagcatct ctgtctcttt
 2940
 atgccatgca gctgtcacag caggaacatg gtagaacaca gagtctatca tcttgttacc
 3000
 agtataatat ccagggtcag ccagtgttga aagagacatt ttgtctacct ggcactgctt
 3060
 tctcttttta gctttactac tcttttgtga ggagtacatg ttatgcatat taacattcct
 3120
 catgtcatat gaaaatacaa aataagcaga aaagaaattt aaatcaacca aaattctgat
 3180
 gccccaaata accactttta atgccttggg gtaagtatac ctctgaactt ttttctgtgc
 3240
 ctttaaacag atatataatt tttttaaag aaaataaaac catatatacct attttatctc
 3300
 ctcttttta aaccttataa actataacac tgtaaaaaaa aaaa
 3344

<210> 3414

<211> 723

<212> PRT

<213> Homo sapiens

<400> 3414

Met	Lys	Glu	Pro	Leu	Asp	Gly	Glu	Cys	Gly	Lys	Ala	Val	Val	Pro	Gln
1				5					10					15	
Gln	Glu	Leu	Leu	Asp	Lys	Ile	Lys	Glu	Glu	Pro	Asp	Asn	Ala	Gln	Glu
			20					25					30		
Tyr	Gly	Cys	Val	Gln	Gln	Pro	Lys	Thr	Gln	Glu	Ser	Lys	Leu	Lys	Ile
		35					40					45			
Gly	Gly	Val	Ser	Ser	Val	Asn	Glu	Arg	Pro	Ile	Ala	Gln	Gln	Leu	Asn
		50				55					60				
Pro	Gly	Phe	Gln	Leu	Ser	Phe	Ala	Ser	Ser	Gly	Pro	Ser	Val	Leu	Leu
65					70					75				80	
Pro	Ser	Val	Pro	Ala	Val	Ala	Ile	Lys	Val	Phe	Cys	Ser	Gly	Cys	Lys
				85					90				95		
Lys	Met	Leu	Tyr	Lys	Gly	Gln	Thr	Ala	Tyr	His	Lys	Thr	Gly	Ser	Thr
		100						105					110		
Gln	Leu	Phe	Cys	Ser	Thr	Arg	Cys	Ile	Thr	Arg	His	Ser	Ser	Pro	Ala
		115					120					125			
Cys	Leu	Pro	Pro	Pro	Pro	Lys	Lys	Thr	Cys	Thr	Asn	Cys	Ser	Lys	Asp
		130				135					140				
Ile	Leu	Asn	Pro	Lys	Asp	Val	Ile	Thr	Thr	Arg	Phe	Glu	Asn	Ser	Tyr
145				150						155				160	
Pro	Ser	Lys	Asp	Phe	Cys	Ser	Gln	Ser	Cys	Leu	Ser	Ser	Tyr	Glu	Leu
			165						170				175		
Lys	Lys	Lys	Pro	Val	Val	Thr	Ile	Tyr	Thr	Lys	Ser	Ile	Ser	Thr	Lys
			180					185					190		
Cys	Ser	Met	Cys	Gln	Lys	Asn	Ala	Asp	Thr	Arg	Phe	Glu	Val	Lys	Tyr

	195					200					205					
Gln	Asn	Val	Val	His	Gly	Leu	Cys	Ser	Asp	Ala	Cys	Phe	Ser	Lys	Phe	
	210					215					220					
His	Ser	Thr	Asn	Asn	Leu	Thr	Thr	Asn	Cys	Cys	Glu	Asn	Cys	Gly	Ser	
225					230					235					240	
Tyr	Cys	Tyr	Ser	Ser	Ser	Gly	Pro	Cys	Gln	Ser	Gln	Lys	Val	Phe	Ser	
				245					250					255		
Ser	Thr	Ser	Val	Thr	Ala	Tyr	Lys	Gln	Asn	Ser	Ala	Gln	Ile	Pro	Pro	
			260					265					270			
Tyr	Ala	Leu	Gly	Lys	Ser	Leu	Arg	Ser	Ser	Ala	Glu	Met	Ile	Glu	Asn	
	275						280					285				
Thr	Asn	Ser	Leu	Gly	Lys	Thr	Glu	Leu	Phe	Cys	Ser	Ile	Asn	Cys	Leu	
	290					295					300					
Ser	Ala	Tyr	Arg	Val	Lys	Thr	Val	Thr	Ser	Ala	Gly	Val	Gln	Val	Ser	
305					310					315					320	
Cys	His	Ser	Cys	Lys	Thr	Ser	Ala	Ile	Pro	Gln	Tyr	His	Leu	Ala	Met	
				325					330					335		
Ser	Asp	Gly	Thr	Ile	Tyr	Ser	Phe	Cys	Ser	Ser	Ser	Cys	Val	Val	Ala	
			340					345					350			
Phe	Gln	Asn	Val	Phe	Ser	Lys	Pro	Lys	Gly	Thr	Asn	Ser	Ser	Ala	Val	
	355						360				365					
Pro	Leu	Ser	Gln	Gly	Gln	Val	Val	Val	Ser	Pro	Pro	Ser	Ser	Arg	Ser	
	370					375					380					
Ala	Val	Ser	Ile	Gly	Gly	Asn	Thr	Ser	Ala	Val	Ser	Pro	Ser	Ser	Ser	
385					390				395						400	
Ile	Arg	Gly	Ser	Ala	Ala	Ala	Ser	Leu	Gln	Pro	Leu	Gly	Glu	Gln	Ser	
				405					410					415		
Gln	Gln	Val	Ala	Leu	Thr	His	Thr	Val	Val	Lys	Leu	Lys	Cys	Gln	His	
			420					425					430			
Cys	Asn	His	Leu	Phe	Ala	Thr	Lys	Pro	Glu	Leu	Leu	Phe	Tyr	Lys	Gly	
	435						440					445				
Lys	Met	Phe	Leu	Phe	Cys	Gly	Lys	Asn	Cys	Ser	Asp	Glu	Tyr	Lys	Lys	
	450					455					460					
Lys	Asn	Lys	Val	Val	Ala	Met	Cys	Glu	Tyr	Cys	Lys	Ile	Glu	Lys	Ile	
465					470				475						480	
Val	Lys	Glu	Thr	Val	Arg	Phe	Ser	Gly	Ala	Asp	Lys	Ser	Phe	Cys	Ser	
				485					490					495		
Glu	Gly	Cys	Lys	Leu	Leu	Tyr	Lys	His	Asp	Leu	Ala	Lys	Arg	Trp	Gly	
				500				505					510			
Asn	His	Cys	Lys	Met	Cys	Ser	Tyr	Cys	Ser	Gln	Thr	Ser	Pro	Asn	Leu	
	515						520					525				
Val	Gln	Asn	Arg	Leu	Glu	Gly	Lys	Leu	Glu	Glu	Phe	Cys	Cys	Glu	Asp	
	530					535					540					
Cys	Met	Ser	Lys	Phe	Thr	Val	Leu	Phe	Tyr	Gln	Met	Ala	Lys	Cys	Asp	
545					550				555						560	

625		630		635		640
Leu Ser Thr Gly	Asn Thr Asn Ser Val	Leu Lys Gly Ala Val	Thr Lys			
	645	650	655			
Glu Ala Ala Lys	Ile Ile Gln Asp Glu Ser Thr	Gln Glu Asp Ala Met				
	660	665	670			
Lys Phe Pro Ser	Ser Gln Ser Ser Gln Pro Ser	Arg Leu Leu Lys Asn				
	675	680	685			
Lys Gly Ile Ser	Cys Lys Pro Val Thr Gln Thr	Lys Ala Thr Ser Cys				
	690	695	700			
Lys Pro His Thr	Gln His Lys Glu Cys Gln Thr	Glu Cys Pro Val Arg				
705	710	715	720			
Ala Val Cys						

<210> 3415

<211> 3501

<212> DNA

<213> Homo sapiens

<400> 3415

```

ngcagccccg gcggccgaac gcccgcgggc egggactcca tcgtcagaga agtcattcag
60
aattcaaaag aagttctaag ttattgcaa gaaaaaaacc ctgccttcaa gccgggttctt
120
gcaattatcc aggcaggtga cgacaacttg atgcaggaaa tcaaccagaa ttgggtgag
180
gaggctggtc tgaacatcac tcacatttgc ctccctccag atagcagtga agccgagatt
240
atagatgaaa tcttaaagat caatgaagat accagagtac atggccttgc ccttcagatc
300
tctgagaact tgtttagcaa caaagtcctc aatgccttga aaccagaaaa agatgtggat
360
ggagtaacag acataaacct ggggaagctg gtgcgagggg atgcccatga atgttttgtt
420
tcacctgttg ccaaagctgt aattgaactt cttgaaaaat cagtaggtgt caacctagat
480
ggaaaagaaga ttttggtagt gggggcccat gggctcttgg aagctgctct acaatgcctg
540
ttccagagaa aagggtccat gacaatgagc atccagtgga aaacacgcca gcttcaaagc
600
aagcttcacg aggtgacat tgtggtccta ggctcaccta agccagaaga gattcccctt
660
acttggatac aaccaggaac tactgttctc aactgctccc atgacttcct gtcagggaag
720
gttgggtgtg gctctccaag aatanncatt ttggtggact cattgaggaa gatgatgtga
780
ttcttccttg ctgcagctct gcgaattcag aacatggtca gtagtggaag gagatggctt
840
cgtgaacagc agcacaggcg gtggagactt cactgcttga aacttcagcc tctctcccct
900
gtgccaagtg acattgagat ttcaagagga caaactccaa aagctgtgga tgtccttgcc
960
aaggagattg gattgcttgc agatgaaatt gaaatctatg gcaaaagcaa agccaaagta
1020

```

cgtttgccg tgctagaaag gttaaaggat caagcagatg gaaaatacgt cttagttgct
1080
gggatcacac ccacccctct tggagaaggg aagagcacag tcaccatcgg gcttggtgcag
1140
gctctgaccg cacacctgaa tgtcaactcc tttgcctgct tgaggcagcc ttcccaagga
1200
ccgacgtttg gagtgaaggg aggagccgag ggtggtggat atgcccaggt catcccatg
1260
gaggagttca accttcaact gactggagac atccacgcca tcaccgctgc caataacttg
1320
ctggctgccg ccacgcacac gaggattctt catgaaaaca cgcaaacaga taaggctctg
1380
tataatcggc tggttccttt agtgaatggt gtcagagaat ttccagaaat tcagcttgc
1440
cggctaataa aactgggaat aaataagact gatccgagca cactgacaga agaggaagt
1500
agtaaatgtg ccgctctcga catcgacca tctaccatca cgtggcagag agtattggat
1560
acaaatgacc gatttctacg aaaaataacc atcgggcagg gaaacacaga gaagggccat
1620
taccggcagg cgcagtttga catcgagtg gccagcgaga tcatggcggt gctggccctg
1680
acggacagcc tcgcagacat gaaggcacgg ctgggaagga tgggtggtggc cagtgcacaa
1740
agcgggcagc ctgtgacagc agatgatttg ggggtgacag gtgctttgac agttttgatg
1800
aaagatgcaa taaaacaaaa cctgatgcag accctggaag ggacacctgt gtctgtgcat
1860
gcgggccctt ttgctaacat tgctcacggc aactcttcag tgttggtgta taaaattgac
1920
ctgaaactgg ttggtgaaga aggatttgta gtgaccgaag ctggctttgg tgctgacatc
1980
ggaatggaga aattcttcaa catcaagtgc cgagcttcgg gcttggtgcc caacgtggtt
2040
gtgttagtgg caacgggtgc agctctgaag atgcatggag gcgggccaag tgtaacggct
2100
ggtgttcttc ttaagaaaga atatacagag gagaacatcc agctggtggc agacggctgc
2160
tgtaacctcc agaagcaaat tcagatcact cagctctttg gggttcccggt tgggtgggt
2220
ctgaatgtct tcaagaccga caccgcgct gagattgact tgggtgtgta gcttgcaaa
2280
cgggctggtg cctttgatgc agtccctgc tatcactggt cgggttggtg aaaaggatcg
2340
gtggacttgg ctggggtgt gagagaggct gcgagtaaaa gaagccgatt ccagttcctg
2400
tatgatgttc aggttccaat tgggacaag ataaggacca ttgctcaggc tgtctatgga
2460
gccaaagata ttgaactctc tcctgaggca caagccaaaa tagatcgta cactcaacag
2520
ggttttgtaa atttgccat ctgcatggca aagaccaccc tttctctatc tcaccaacct
2580
gacaaaaaag gtgtgccaa ggacttcac ttacctatca gtgacgtccg ggccagcata
2640

ggcgctgggt tcatttacct tttggtcgga acgatgagca ccattgccagg actgcccacc
 2700
 cggccctgct tttatgacat agatcttgat accgaaacag aacaagttaa aggcttgctc
 2760
 taagtggaca aggtcttcac aggacccgat gcagactcct gaaacagact actctttgcc
 2820
 tttttgctgc agttggagaa gaaactgaat ttgaaaaatg tctgttatgc aatgctggag
 2880
 acatggtgaa ataggccaaa gatttcttct tcgttcaaga tgaattctgt tcacagtggg
 2940
 gtatgggtgt cggcaaaagg acctccacca agactgaaag aaactaattt atttctgttt
 3000
 ctgtggagtt tccattattt ctactgctta cactttagaa tgtttatttt atgggggacta
 3060
 agggattagg agtgtgaact aaaaggtaac attttccact ctcaagtttt ctactttgtc
 3120
 tttgaactga aaataaacat ggatctagaa aaccaaccag caagttttca gtgccagata
 3180
 aaactctgcg ctctagaggt aactcctcat gggaggcagc taggagtgtt acctgacacc
 3240
 agtttcttag aaaactgtga caagcaaagc aataacacac gtcgagaaat atctgatcaa
 3300
 gcgggaaatc ttctgactgt cggggatctc tagtaagatc tcttggaaatg aagtgcactg
 3360
 tgtatccaaa actatttttc agcgccagtg aagttgctct tacctaaaac aaatgggttt
 3420
 atgctagttt ccaccaagga atgagtctcg atggccatta aactttctaa gcgcacaggg
 3480
 ctaggaaaag tcaaaaaaaaa a
 3501

<210> 3416

<211> 259

<212> PRT

<213> Homo sapiens

<400> 3416

Xaa	Ser	Pro	Gly	Gly	Arg	Thr	Pro	Ala	Ala	Arg	Asp	Ser	Ile	Val	Arg
1				5					10					15	
Glu	Val	Ile	Gln	Asn	Ser	Lys	Glu	Val	Leu	Ser	Leu	Leu	Gln	Glu	Lys
			20					25					30		
Asn	Pro	Ala	Phe	Lys	Pro	Val	Leu	Ala	Ile	Ile	Gln	Ala	Gly	Asp	Asp
		35				40					45				
Asn	Leu	Met	Gln	Glu	Ile	Asn	Gln	Asn	Leu	Ala	Glu	Glu	Ala	Gly	Leu
	50				55				60						
Asn	Ile	Thr	His	Ile	Cys	Leu	Pro	Pro	Asp	Ser	Ser	Glu	Ala	Glu	Ile
65				70					75				80		
Ile	Asp	Glu	Ile	Leu	Lys	Ile	Asn	Glu	Asp	Thr	Arg	Val	His	Gly	Leu
		85						90					95		
Ala	Leu	Gln	Ile	Ser	Glu	Asn	Leu	Phe	Ser	Asn	Lys	Val	Leu	Asn	Ala
		100						105					110		
Leu	Lys	Pro	Glu	Lys	Asp	Val	Asp	Gly	Val	Thr	Asp	Ile	Asn	Leu	Gly
		115					120					125			
Lys	Leu	Val	Arg	Gly	Asp	Ala	His	Glu	Cys	Phe	Val	Ser	Pro	Val	Ala

```

      130              135              140
Lys Ala Val Ile Glu Leu Leu Glu Lys Ser Val Gly Val Asn Leu Asp
145              150              155              160
Gly Lys Lys Ile Leu Val Val Gly Ala His Gly Ser Leu Glu Ala Ala
      165              170              175
Leu Gln Cys Leu Phe Gln Arg Lys Gly Ser Met Thr Met Ser Ile Gln
      180              185              190
Trp Lys Thr Arg Gln Leu Gln Ser Lys Leu His Glu Ala Asp Ile Val
      195              200              205
Val Leu Gly Ser Pro Lys Pro Glu Glu Ile Pro Leu Thr Trp Ile Gln
      210              215              220
Pro Gly Thr Thr Val Leu Asn Cys Ser His Asp Phe Leu Ser Gly Lys
225              230              235              240
Val Gly Cys Gly Ser Pro Arg Ile Xaa Ile Leu Val Asp Ser Leu Arg
      245              250              255
Lys Met Met

```

```

<210> 3417
<211> 405
<212> DNA
<213> Homo sapiens

```

```

<400> 3417
ggggggggcgg cctgagaaga tattatggct gctgccacgg agcataatcg cccgagcagc
60
ggtgacagga acctggagcg aagatgcagc cccaacctct cccgagaggt gctctacgaa
120
atctttcgct ccctacacac cctgggttga cagettgacc tcagagatga tgtggtgaaa
180
attacaatcg attggaacaa gctccagagc ctctcgcat tccagcctgc attgctcttt
240
agtgcacttg aacaacacat tttatattta caggtaaatt tcttggttaga aatgataacc
300
cgatattgaa aatagaaatt gattgtgggt aagttagttg gagtatttga cagttctaaa
360
cactatatta atagtgttgc taataaaacg ttatttacat ccgga
405

```

```

<210> 3418
<211> 94
<212> PRT
<213> Homo sapiens

```

```

<400> 3418
Met Ala Ala Ala Thr Glu His Asn Arg Pro Ser Ser Gly Asp Arg Asn
1      5      10      15
Leu Glu Arg Arg Cys Ser Pro Asn Leu Ser Arg Glu Val Leu Tyr Glu
      20      25      30
Ile Phe Arg Ser Leu His Thr Leu Val Gly Gln Leu Asp Leu Arg Asp
      35      40      45
Asp Val Val Lys Ile Thr Ile Asp Trp Asn Lys Leu Gln Ser Leu Ser
      50      55      60
Ala Phe Gln Pro Ala Leu Leu Phe Ser Ala Leu Glu Gln His Ile Leu

```

```

65                               70                               75                               80
Tyr Leu Gln Val Asn Phe Leu Leu Glu Met Ile Thr Arg Tyr
      85                               90

<210> 3419
<211> 418
<212> DNA
<213> Homo sapiens

<400> 3419
cccgggcctc ccacctctct aacggttcac acctgacctg tcccatcctg ccactcccg
60
ccgtggcacc cactggtctg ctgggcctcc aggtctctccc tgttctggat gtttcattgt
120
aatgggggcta cgtcgcgtga cctcacgtgt ggttctcttg agcgtagtgc tttccagggc
180
aaccgtgtca cagtgcagat ggacgcacgg acggcgggtga gcctttaacg ccaagcaaca
240
agtcccatgt tggacggagg tttgcatttc tcttgggtcc acatctatgg tgccccata
300
gggcgccttg aggctcgccc cggtcaggct tgccatttct ggggaagagg actggggggg
360
agccttctgc cccattacc accgccatt cccctggcgc tctcggagag aggctgga
418

<210> 3420
<211> 105
<212> PRT
<213> Homo sapiens

<400> 3420
Met Ala Ser Leu Thr Gly Ala Ser Leu Lys Ala Pro Tyr Gly Gly Thr
1      5      10      15
Ile Asp Val Asp Pro Gly Glu Met Gln Thr Ser Val His Asn Gly Thr
      20      25      30
Cys Cys Leu Ala Leu Lys Ala His Arg Arg Pro Cys Val His Leu His
      35      40      45
Cys Asp Thr Val Ala Leu Glu Ser Thr Thr Leu Arg Gly Thr Thr Arg
      50      55      60
Glu Val Thr Arg Arg Ser Pro Ile Asn Met Lys His Pro Glu Gln Gly
65      70      75      80
Glu Pro Gly Gly Pro Ala Asp Gln Trp Val Pro Arg Arg Glu Trp Ala
      85      90      95
Gly Trp Asp Gly Ser Gly Val Asn Arg
      100      105

<210> 3421
<211> 2988
<212> DNA
<213> Homo sapiens

<400> 3421
ggatccccgg acaggaaagg aggactggag aaacgccatg ctctgcatca cgagggtcgc
60

```

catcctgtgt aatcgatagg agaaagtcag gatgagctgc acaccgagaa cgtgctccgt
120
ggactgcagg ggaagctcca gcttaaaatg taacatgtcc gtcttcccat cctgggtccet
180
gtcttcttct ctagtcgaaa cgagcgggac gcgcaggcga tccccttgca gccagttacc
240
gcgcggggct ctgctccaaa gccgcgctgt tcctgctgct ggccgctgcg ctcacgtaca
300
tcccgcgct gctggtggcc ttccggagcc acgggttttg gctgaagcgg agcagctacg
360
aggagcagcc gaccgtgcgc ttccaacacc aggtgctgct cgtggccctg ctcggaaccg
420
aaagcgacgg gttcctcgcc tggagcacgt tcccggcctt caaccggctg caaggggatc
480
gcctgcgct cccctcctt tcctggagga aattatgccc gttgtgtaca gcaagacagt
540
gggtcattgt gtatgtacag aagtgtgtg gattcctccc agactcatta gtgaccaggg
600
ctgtggggcc tgtttgggtt tccctagact agagaagaag acaggaacca ggatgggaag
660
acggacatgt tacattttaa gctggagctt cccctgcagt ccacggagca cgttctcggt
720
gtgcagctca tcctgacttt ctctatcga ttacacagga tggcgacct cgtgatgcag
780
agcatggcgt ttctccagtc ctcccttctt gtcccgggat cccagttata cgtgaacgga
840
gacctgaggc tgcagcagaa gcagccgctg agctgtggtg gcctagatgc ccgatacaac
900
atatecgtga tcaacgggac cagccctttt gcctatgact acgacctcac ccatattgtt
960
gctgcctacc aggagaggaa cgaaagctcc cagtgaggaa ctggctcttct ggagactctg
1020
tgtggcatag agtgattcaa ccaccttaag aagacctctg gctttcctgg aacacagatg
1080
tcgagacatc tcccatggat ttgtgatcag cgttgacagt ctcccagcag ccctggacgg
1140
tggcccccag ccgcccgcgt gtggctgcc aeggttctcca gcaagacagt gacagtgtct
1200
ctcctggcac agaccacctg cctcctgtct tcatcatct cccggccagg gccctcatcc
1260
ccagccggcg gcgaggatcg tgtgcacgtg ctggtgctgt cctcgtggcg ctggggctca
1320
tccttcttgg gccagctctt cagccagcac cccgacgtct tctacctgat ggagcccgcg
1380
tggcatgtgt ggaccacct gtgcagggc agcgcgcaa cgetgcacat ggccgtgcgc
1440
gacctgatgc gctctatctt tttgtgcgac atggacgtgt ttgatgccta catggaacct
1500
ggtccccgga gacagtccag cctctttcag tgggagaaca gccgggccct gtgttctgca
1560
cctgcctgtg acatcatccc acaagatgaa atcatcccc gggtcactg caggctcctg
1620
tgcagtcaac agccctttga ggtggtggag aaggcctgcc gtcctacag ccacgtggtg
1680

ctcaaggagg tgcgcttctt caacctgcag tccctctacc cgctgctgaa agacccctcc
 1740
 ctcaacctgc atatcggtga cctgggtccg gacccccggg ccgtgctgcg ctcccgggag
 1800
 gcggcgggcc cgatactggc acgcgacaac ggcatcggtg tgggcaccaa cggcaagtgg
 1860
 gtggaggccg accctcaact gcgcctgatt cgcgaggtgt gccgcagcca cgtgcgcatc
 1920
 gccgaggccg ccacactcaa gccgccaccc ttcttgcgcg gccgctaccg cctgggtgcg
 1980
 ttcgaggacc tggcgcgggg gccgctggca gagatccgcg cactctacgc cttcacggc
 2040
 ctgaccctca cgccacagct cgaggcctgg atccacaaca tcacccacgg gtcggggatc
 2100
 ggcaagccaa tcgaggcctt ccatacttcg tctaggaatg cgcgcaacgt ctcccaggcc
 2160
 tggcgccacg cgttgccctt cactaagatc ctgcgcgtgc aggaggtgtg cgccggcgcg
 2220
 ctgcagctgc tgggctaccg gcctgtgtac tctgcggacc agcagcgtga cctcacctg
 2280
 gatctggtgc tgccacgagg ccagaccac ttcagctggg catcgctga ctgagaactc
 2340
 tgggccttag agcaagcccc gaactgtggt cgccaggccc aggaggcgac tgcattgttg
 2400
 agagggagct ggggcgcatg gggaagcagg tccctactat caaccgggag tttgggtcc
 2460
 tcccctgaag taggcaagga ctgcacgttt ctttctctcc tgattctcgg ttttctttg
 2520
 agtcttctgg agctgccttc tcatcagggt cactcttcat ggaaagcaac tcttgcctc
 2580
 acctcttctg ggcgagggg gtaagttact gctaaattaa attaaatgtg tgccaggccg
 2640
 ggtgcggtg ctcatgcctg taatcccagc attttgagag gctgaggcgg gtggatcacc
 2700
 tgaggtcagg attcaaaacc agcctggcca acatagtga accccctctc tactaaaaat
 2760
 gcaaaaatta gtccggcggt gtggcacact cctgtaatcc cagctactta ggaggctgag
 2820
 gtggggagaat cacttggtgact ccaaagggtg aggttgaggt aagctgaaat catgccactg
 2880
 caccctagct tgggtggcaa agcaaaactc tatcaaaaaa ataattaata aatttgttca
 2940
 aaagtcctgc cgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2988

<210> 3422

<211> 418

<212> PRT

<213> Homo sapiens

<400> 3422

Met Ser Arg His Leu Pro Trp Ile Cys Asp Gln Arg Cys Ser Ser Pro
 1 5 10 15
 Ser Ser Pro Gly Arg Trp Pro Pro Ala Ala Arg Met Trp Leu Pro Arg

20 25 30
 Phe Ser Ser Lys Thr Val Thr Val Leu Leu Leu Ala Gln Thr Thr Cys
 35 40 45
 Leu Leu Leu Phe Ile Ile Ser Arg Pro Gly Pro Ser Ser Pro Ala Gly
 50 55 60
 Gly Glu Asp Arg Val His Val Leu Val Leu Ser Ser Trp Arg Ser Gly
 65 70 75 80
 Ser Ser Phe Leu Gly Gln Leu Phe Ser Gln His Pro Asp Val Phe Tyr
 85 90 95
 Leu Met Glu Pro Ala Trp His Val Trp Thr Thr Leu Ser Gln Gly Ser
 100 105 110
 Ala Ala Thr Leu His Met Ala Val Arg Asp Leu Met Arg Ser Ile Phe
 115 120 125
 Leu Cys Asp Met Asp Val Phe Asp Ala Tyr Met Glu Pro Gly Pro Arg
 130 135 140
 Arg Gln Ser Ser Leu Phe Gln Trp Glu Asn Ser Arg Ala Leu Cys Ser
 145 150 155 160
 Ala Pro Ala Cys Asp Ile Ile Pro Gln Asp Glu Ile Ile Pro Arg Ala
 165 170 175
 His Cys Arg Leu Leu Cys Ser Gln Gln Pro Phe Glu Val Val Glu Lys
 180 185 190
 Ala Cys Arg Ser Tyr Ser His Val Val Leu Lys Glu Val Arg Phe Phe
 195 200 205
 Asn Leu Gln Ser Leu Tyr Pro Leu Leu Lys Asp Pro Ser Leu Asn Leu
 210 215 220
 His Ile Val His Leu Val Arg Asp Pro Arg Ala Val Leu Arg Ser Arg
 225 230 235 240
 Glu Ala Ala Gly Pro Ile Leu Ala Arg Asp Asn Gly Ile Val Leu Gly
 245 250 255
 Thr Asn Gly Lys Trp Val Glu Ala Asp Pro His Leu Arg Leu Ile Arg
 260 265 270
 Glu Val Cys Arg Ser His Val Arg Ile Ala Glu Ala Ala Thr Leu Lys
 275 280 285
 Pro Pro Pro Phe Leu Arg Gly Arg Tyr Arg Leu Val Arg Phe Glu Asp
 290 295 300
 Leu Ala Arg Glu Pro Leu Ala Glu Ile Arg Ala Leu Tyr Ala Phe Thr
 305 310 315 320
 Gly Leu Thr Leu Thr Pro Gln Leu Glu Ala Trp Ile His Asn Ile Thr
 325 330 335
 His Gly Ser Gly Ile Gly Lys Pro Ile Glu Ala Phe His Thr Ser Ser
 340 345 350
 Arg Asn Ala Arg Asn Val Ser Gln Ala Trp Arg His Ala Leu Pro Phe
 355 360 365
 Thr Lys Ile Leu Arg Val Gln Glu Val Cys Ala Gly Ala Leu Gln Leu
 370 375 380
 Leu Gly Tyr Arg Pro Val Tyr Ser Ala Asp Gln Gln Arg Asp Leu Thr
 385 390 395 400
 Leu Asp Leu Val Leu Pro Arg Gly Pro Asp His Phe Ser Trp Ala Ser
 405 410 415
 Pro Asp

<210> 3423

<211> 1851

<212> DNA

<213> Homo sapiens

<400> 3423

cgatcgagag ctggaatagc catcggtgac cgtaccgcc actcaggtct gccttctacg
60
tctactggtt atggagcctg tctgtcactc ttctcgctgt actaaccgc ttacccccgg
120
cgttcattgg ccgtggcctc tctagctccg cccctaggg gggctcgacc cgtaaccagt
180
gaggcgcggg ccaacctagt gcgacgtgtg ggcgtggcgg gggctggggg ctgcgggcga
240
aggtggtagc ccattggagg tcccgggagc gaagtccagc tgccgttagg cgctgggata
300
gtcgcacgct ggatgcacat acgtccgcgc agccctggg gcgaagaggc cgcgtccgcc
360
ttcagttgtg gccggtgctt cggccctga ccttcgccc ccaaagacca gctctaactg
420
gagcgccctg gccgcccctg cccagcctcg tacacgccgc cagcctcgcc cagccggtgt
480
ccggagaccc tcgggcccgtg tccatttgtg ggcaaagcca gcggggcagg cttggccaga
540
gtgcaccact cggcgccgct ccaggcccga cgtctgggc gcgcccggaa cccaggtta
600
atttgagtg gcccctggag tcagtttctt acaccatccg aggccccacc cagcacgagc
660
tacagcctcc accaggaggg cctggaaccc tcagcctgca cttcctcaac cctcaggaag
720
ctcagcgtg ggcagtccta gtccgaggtg ccaccgtgga aggacagaat ggcagcaaga
780
gcaactcacc accagccttg ggcccagaag catgcctgt ctcctgccc agtcccccg
840
aagcctccac actcaagggc cctccacctg aggcagatct tcctaggagc cctggaaact
900
tgacggagag agaagagctg gcagggagcc tggcccgggc tattgcaggt ggagacgaga
960
agggggcagc ccaagtggca gccgtcctgg cccagcatcg tgtggccctg agtggtcagc
1020
ttcaggaggc ctgcttccca cctggcccca tcaggctgca ggtcacactt gaagacgctg
1080
cctctgccc atccgccgcg tcctctgcac acgttgccct gcagggtccac cccactgca
1140
ctgttgacg tctccaggag caggtgggca cagggctctg ggagccctg caggggcaga
1200
ggagcctagg tgacatcacc tgccctgatg ctctggccac aggtgttctc agagctcggg
1260
ttcccgcag ccgtgcaacg ctgggtcatc ggacggtgcc tgtgtgtgcc tgagcgagc
1320
cttgccctct acgggggttc gcaggatggg gaccctgctt tcctctactt gctgtcagct
1380
cctcgagaag cccagccac aggcctagc cctcagcacc cccagaagat ggacggggaa
1440
cttgagcgt tgtttcccc atcattgggg ctacccccag gccccagcc agctgcctcc
1500

agcctgcccc gtccactcca gccagctgg tctgtcctt cctgcacctt catcaatgcc
 1560
 ccagaccgcc ctggctgtga gatgtgtagc acccagaggc cctgcacttg ggacccccctt
 1620
 gctgcagctt ccacctagca gccaccagag gttacaaggg gagagtggcc cttccctcac
 1680
 aagtccgaca tctccaggcc cccactgaac tccggggacc tctactgact gcttgctggg
 1740
 acagtcacca gggttggggg gaagggccac aaaatgaaac cattaaagac ccttaagagc
 1800
 caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1851

<210> 3424
 <211> 136
 <212> PRT
 <213> Homo sapiens

<400> 3424
 Met Leu Trp Pro Gln Val Phe Ser Glu Leu Gly Phe Pro Pro Ala Val
 1 5 10 15
 Gln Arg Trp Val Ile Gly Arg Cys Leu Cys Val Pro Glu Arg Ser Leu
 20 25 30
 Ala Ser Tyr Gly Val Arg Gln Asp Gly Asp Pro Ala Phe Leu Tyr Leu
 35 40 45
 Leu Ser Ala Pro Arg Glu Ala Pro Ala Thr Gly Pro Ser Pro Gln His
 50 55 60
 Pro Gln Lys Met Asp Gly Glu Leu Gly Arg Leu Phe Pro Pro Ser Leu
 65 70 75 80
 Gly Leu Pro Pro Gly Pro Gln Pro Ala Ala Ser Ser Leu Pro Ser Pro
 85 90 95
 Leu Gln Pro Ser Trp Ser Cys Pro Ser Cys Thr Phe Ile Asn Ala Pro
 100 105 110
 Asp Arg Pro Gly Cys Glu Met Cys Ser Thr Gln Arg Pro Cys Thr Trp
 115 120 125
 Asp Pro Leu Ala Ala Ala Ser Thr
 130 135

<210> 3425
 <211> 1416
 <212> DNA
 <213> Homo sapiens

<400> 3425
 tccggcggaa agggctctttg ctgctgcgcc cgggcagggg ctgccgcggc cccaggtccc
 60
 gcttcgagac gcggcgcggt ccaggcggga ggcgactccc taggaaggga cccggggcgg
 120
 gaggaggaag tgaggccgcg cggaaggaag gcggcgagcc ccggggcccc gaggccttgg
 180
 ccgcgtcaca gcacccacat ggcctctgga gtgggcgcgg ccttcgagga actgcctcac
 240
 gacggcacgt gtgacgagtg cgagcccgac gaggtccgg gggccgagga agtgtgccga
 300

gaatgcggct tctgctactg ccgccgccat gccgaggcgc acaggcagaa gttcctcagt
 360
 caccatcttg ccgaatacgt ccacggctcc caggcctgga ccccgccagc tgacggagag
 420
 ggggcgggga aggaagaagc ggaggtcaag gtggagcagg agaggagat agaaagcag
 480
 gcagggaag agagttagtc ggaggaagag agcagtcag aggaagagag cgagacagag
 540
 gaagagagtg aggatgagag cgatgaggag agtgaagaag acagcgagga agaaatggag
 600
 gatgagcaag aaagcaggc cgaagaagac aaccaagaag aaggggaatc cgaggcggag
 660
 ggagaaactg aggcagaaag tgaatttgac ccagaaatag aaatggaagc agagagagt
 720
 gccaaagagga agtgtccgga ccatgggctt gatttgagta cctattgcca ggaagatagg
 780
 cagctcatct gtgtcctgtg tccagtcatt ggggtccacc agggccacca actctccacc
 840
 ctagacgaag cctttgaaga attaagaagc aaagactcag gtggactgaa ggccgctatg
 900
 atcgaattgg tggaaagggt gaagttcaag agctcagacc ctaaagtaac tcgggaccaa
 960
 atgaagatgt ttatacagca ggaatttaag aaagttcaga aagtgattgc tgatgaggag
 1020
 cagaaggccc ttcatttagt ggacatccaa gaggcaatgg ccacagctca tgtgactgag
 1080
 atactggcag acatccaatc ccacatggat aggttgatga ctcatagggc ccaagccaag
 1140
 gaacaacttg atacctctaa tgaatcagct gagccaaagg cagagggcga tgaggaagga
 1200
 cccagtgggt ccagtgaaga agaggacaca tgaaggcttg ctacccccag tgaaaatcat
 1260
 cccctccctt tgtgtgtatg tgacagcgtg tatgtaacgg cttctgattt ctgtgaaagc
 1320
 tgctcagcaa caaacgtact tccaccagat gtgtccccag atccacagca ggcacatatc
 1380
 tctccaaggg atgaccagtt ttatgcttac tgtgtg
 1416

<210> 3426

<211> 410

<212> PRT

<213> Homo sapiens

<400> 3426

Ser Gly Gly Lys Gly Leu Cys Cys Cys Ala Arg Ala Gly Ala Ala Ala
 1 5 10 15
 Ala Pro Gly Pro Ala Ser Arg Arg Gly Ala Val Gln Ala Gly Gly Asp
 20 25 30
 Ser Leu Gly Arg Asp Pro Gly Arg Glu Glu Glu Val Arg Pro Arg Gly
 35 40 45
 Arg Lys Ala Ala Ser Pro Gly Ala Pro Arg Pro Trp Pro Arg His Ser
 50 55 60
 Thr His Met Ala Ser Gly Val Gly Ala Ala Phe Glu Glu Leu Pro His

```

65          70          75          80
Asp Gly Thr Cys Asp Glu Cys Glu Pro Asp Glu Ala Pro Gly Ala Glu
      85          90          95
Glu Val Cys Arg Glu Cys Gly Phe Cys Tyr Cys Arg Arg His Ala Glu
      100         105         110
Ala His Arg Gln Lys Phe Leu Ser His His Leu Ala Glu Tyr Val His
      115         120         125
Gly Ser Gln Ala Trp Thr Pro Pro Ala Asp Gly Glu Gly Ala Gly Lys
      130         135         140
Glu Glu Ala Glu Val Lys Val Glu Gln Glu Arg Glu Ile Glu Ser Glu
145         150         155         160
Ala Gly Glu Glu Ser Glu Ser Glu Glu Glu Ser Glu Ser Glu Glu Glu
      165         170         175
Ser Glu Thr Glu Glu Glu Ser Glu Asp Glu Ser Asp Glu Glu Ser Glu
      180         185         190
Glu Asp Ser Glu Glu Glu Met Glu Asp Glu Gln Glu Ser Glu Ala Glu
      195         200         205
Glu Asp Asn Gln Glu Glu Gly Glu Ser Glu Ala Glu Gly Glu Thr Glu
      210         215         220
Ala Glu Ser Glu Phe Asp Pro Glu Ile Glu Met Glu Ala Glu Arg Val
225         230         235         240
Ala Lys Arg Lys Cys Pro Asp His Gly Leu Asp Leu Ser Thr Tyr Cys
      245         250         255
Gln Glu Asp Arg Gln Leu Ile Cys Val Leu Cys Pro Val Ile Gly Ala
      260         265         270
His Gln Gly His Gln Leu Ser Thr Leu Asp Glu Ala Phe Glu Glu Leu
      275         280         285
Arg Ser Lys Asp Ser Gly Gly Leu Lys Ala Ala Met Ile Glu Leu Val
      290         295         300
Glu Arg Leu Lys Phe Lys Ser Ser Asp Pro Lys Val Thr Arg Asp Gln
305         310         315         320
Met Lys Met Phe Ile Gln Gln Glu Phe Lys Lys Val Gln Lys Val Ile
      325         330         335
Ala Asp Glu Glu Gln Lys Ala Leu His Leu Val Asp Ile Gln Glu Ala
      340         345         350
Met Ala Thr Ala His Val Thr Glu Ile Leu Ala Asp Ile Gln Ser His
      355         360         365
Met Asp Arg Leu Met Thr Gln Met Ala Gln Ala Lys Glu Gln Leu Asp
      370         375         380
Thr Ser Asn Glu Ser Ala Glu Pro Lys Ala Glu Gly Asp Glu Glu Gly
385         390         395         400
Pro Ser Gly Ala Ser Glu Glu Glu Asp Thr
      405         410

```

<210> 3427

<211> 580

<212> DNA

<213> Homo sapiens

<400> 3427

ggatcccttc tcttcaaaat tgtagacgcg tctccgagtc ctttcactca tcggaggctg

60

ccggatttca atgtcatagt tccattgtc aatgacatca tcggagaact tgacctgctg

120

ggggtctggat tgagacttgg accttctgag cactggcaga tgtactggct tctcttcagg
 180
 caggattttc tctggacaca actctgaact tagactcttt aaggactctg cactcctgtg
 240
 cagcatggaa gagttcaaag ttcccatatt gctcatcttc tcacaatctt ctgtttccat
 300
 ctccctcaaaa ttttgcagag aatacaatga tggccttggc ttgttttctc catccaccga
 360
 agccccctgtg atattggaca atgccaaaga atccatcgaa tcccgaacac ttgtctctgg
 420
 tttcaggtct gacagacact ccagggaatc ttcataccac tgtgtttcat catgattata
 480
 ccctgaagcc ccatgggtcca gttccaattc ctgaagcctt ctactgcttg cagggcctgg
 540
 gtggctgccca taagcagaat cgcccagtc atcttgtgac
 580

<210> 3428

<211> 132

<212> PRT

<213> Homo sapiens

<400> 3428

Met	Asp	Ser	Leu	Ala	Leu	Ser	Asn	Ile	Thr	Gly	Ala	Ser	Val	Asp	Gly
1				5					10					15	
Glu	Asn	Lys	Pro	Arg	Pro	Ser	Leu	Tyr	Ser	Leu	Gln	Asn	Phe	Glu	Glu
			20					25					30		
Met	Glu	Thr	Glu	Asp	Cys	Glu	Lys	Met	Ser	Asn	Met	Gly	Thr	Leu	Asn
		35					40					45			
Ser	Ser	Met	Leu	His	Arg	Ser	Ala	Glu	Ser	Leu	Lys	Ser	Leu	Ser	Ser
		50				55					60				
Glu	Leu	Cys	Pro	Glu	Lys	Ile	Leu	Pro	Glu	Glu	Lys	Pro	Val	His	Leu
65					70				75					80	
Pro	Val	Leu	Arg	Arg	Ser	Lys	Ser	Gln	Ser	Arg	Pro	Gln	Gln	Val	Lys
			85					90					95		
Phe	Ser	Asp	Asp	Val	Ile	Asp	Asn	Gly	Asn	Tyr	Asp	Ile	Glu	Ile	Arg
		100					105						110		
Gln	Pro	Pro	Met	Ser	Glu	Arg	Thr	Arg	Arg	Arg	Val	Tyr	Asn	Phe	Glu
		115				120						125			
Glu	Arg	Gly	Ser												
		130													

<210> 3429

<211> 634

<212> DNA

<213> Homo sapiens

<400> 3429

cccggggggc tgggagggga ggcacagtct ggtctgcact gaggtaggcc gccgtggaga
 60
 aggggaaggga gccggcagct ggatgtggca ggatgatttc tcttgagagt agccctcgcg
 120
 gtcagcttcc ttttcatact ttcccggcgt tctctccacg agcagggtgca ccagggaacct
 180

gtccctctgt cctacacggt caccacagtg acgacccaag gcttccccctt gcctacaggc
 240
 cagcacatcc ctggctgcag tgcccagcag ctcccagcat gctccgtgat gtccagtggg
 300
 cagcattacc ccctctgctg cctcccgcgc ccgcttatcc aggcgtgcac catgcagcag
 360
 ctgcctgtgc cctatcaggg ctacccccac ctcatctcca gtgaccacta catcctgcac
 420
 cccccaccac cgggcacaca cccagcagct ccagggtctg tataagaaac cctgtggaag
 480
 gcccatccct gtcttaggcc acccaggcag gacactccac tgttaaggcc cacagcctca
 540
 actcctgggc ctctgccaag ctgtgaggca ggtacagggg tactggaagg ttcctgaacc
 600
 ttgaaacact ctattaccaa atgtgaacac gcgt
 634

<210> 3430
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3430
 Phe Leu Leu Arg Val Ala Leu Ala Val Ser Phe Leu Phe Ile Leu Ser
 1 5 10 15
 Arg Arg Ser Leu His Glu Gln Val His Gln Gly Pro Val Pro Leu Ser
 20 25 30
 Tyr Thr Val Thr Thr Val Thr Thr Gln Gly Phe Pro Leu Pro Thr Gly
 35 40 45
 Gln His Ile Pro Gly Cys Ser Ala Gln Gln Leu Pro Ala Cys Ser Val
 50 55 60
 Met Phe Ser Gly Gln His Tyr Pro Leu Cys Cys Leu Pro Pro Pro Leu
 65 70 75 80
 Ile Gln Ala Cys Thr Met Gln Gln Leu Pro Val Pro Tyr Gln Ala Tyr
 85 90 95
 Pro His Leu Ile Ser Ser Asp His Tyr Ile Leu His Pro Pro Pro
 100 105 110
 Gly Thr His Pro Ala Ala Pro Gly Ser Val
 115 120

<210> 3431
 <211> 1396
 <212> DNA
 <213> Homo sapiens

<400> 3431
 tgcagctcgg cctctgctgc ctgcggtgct tcttcgtggc tctgggcatg gcacgcggacc
 60
 ccattctcac gctggcgccc ccgctgcatt gccactacgg ggccttcccc cctaattgcct
 120
 ctgcgtggga gcagcgtccc aatgccagcg cgtcacgtcg ccagcgtgc cctagcacgc
 180
 agcgccgcca gccgtgtcgc caacagtacc aaatcgtcgt gcagcggcctt cgcgccgcgc
 240

gacttcaacc attgcctcaa ggattgggac tataatggcc ttctgtgct caccaccaac
 300
 gccatcgcc agtgggatct ggtgtgtgac ctgggtggc aggtgatcct ggagcagatc
 360
 ctcttcatct tgggctttgc ctccggctac ctgttctggt gttacccgc agacagattt
 420
 ggccgtcgcg ggattgtgct gctgacctg gggctggtgg gcccctgtgg agtaggaggg
 480
 gctgtgcag gctcctccac aggcgtcatg gccctccgat tctcttggg ctttctgctt
 540
 gccggtgttg acctgggtgt ctacctgatg cgctggagc tgtgcgaccc aaccagagg
 600
 ctccgggtgg ccctggcagg ggagtgttg ggggtgggag ggcacttctt gttcttggg
 660
 ctggcccttg tctctaagga ttggcgattc ctacagcgaa tgatcaccgc tccctgcac
 720
 ctcttctgt tttatggctg gccgtggttg ttctggagt ccgcacggtg gctgatagt
 780
 aagcggcaga ttgaggaggc tcagtctgtg ctgaggatcc tggctgagcg aaaccggccc
 840
 catgggcaga tgctggggga ggaggccag gaggccctgc aggacctgga gaatacctgc
 900
 cctctccctg caacatctc ctttctctt gcttccctcc tcaactaccg caacatctg
 960
 aaaaatctgc ttatcctggg cttcaccaac ttcatgccc atgccattcg ccactgctac
 1020
 cagcctgtgg gaggaggagg gagcccatcg gacttctacc tgtgctctct gctggccagc
 1080
 ggcaccgcag ccctggcctg tgtcttctg ggggtcaccg tggaccgatt tggccgcgg
 1140
 ggcaccttc ttctctccat gacccttacc ggcattgctt ccttggtcct gctgggctg
 1200
 tgggattgtg agcatcctat cttccccaca gtgtgggctc aacaaggga ccccaacaga
 1260
 gatctgaacg aggtgccat caccacttct tctgtccttg ggctcttctc ctccaagct
 1320
 gccgccatcc tcagcacct ccttgctgct gaggtcatcc ccaccactgt ccggggccgt
 1380
 ggctgggcc tgatca
 1396

<210> 3432

<211> 296

<212> PRT

<213> Homo sapiens

<400> 3432

Met Ala Leu Arg Phe Leu Leu Gly Phe Leu Leu Ala Gly Val Asp Leu
 1 5 10 15
 Gly Val Tyr Leu Met Arg Leu Glu Leu Cys Asp Pro Thr Gln Arg Leu
 20 25 30
 Arg Val Ala Leu Ala Gly Glu Leu Val Gly Val Gly Gly His Phe Leu
 35 40 45
 Phe Leu Gly Leu Ala Leu Val Ser Lys Asp Trp Arg Phe Leu Gln Arg

50		55		60											
Met	Ile	Thr	Ala	Pro	Cys	Ile	Leu	Phe	Leu	Phe	Tyr	Gly	Trp	Pro	Gly
65				70						75				80	
Leu	Phe	Leu	Glu	Ser	Ala	Arg	Trp	Leu	Ile	Val	Lys	Arg	Gln	Ile	Glu
			85					90						95	
Glu	Ala	Gln	Ser	Val	Leu	Arg	Ile	Leu	Ala	Glu	Arg	Asn	Arg	Pro	His
		100						105					110		
Gly	Gln	Met	Leu	Gly	Glu	Glu	Ala	Gln	Glu	Ala	Leu	Gln	Asp	Leu	Glu
	115						120					125			
Asn	Thr	Cys	Pro	Leu	Pro	Ala	Thr	Ser	Ser	Phe	Ser	Phe	Ala	Ser	Leu
130					135					140					
Leu	Asn	Tyr	Arg	Asn	Ile	Trp	Lys	Asn	Leu	Leu	Ile	Leu	Gly	Phe	Thr
145				150					155					160	
Asn	Phe	Ile	Ala	His	Ala	Ile	Arg	His	Cys	Tyr	Gln	Pro	Val	Gly	Gly
			165						170					175	
Gly	Gly	Ser	Pro	Ser	Asp	Phe	Tyr	Leu	Cys	Ser	Leu	Leu	Ala	Ser	Gly
		180						185					190		
Thr	Ala	Ala	Leu	Ala	Cys	Val	Phe	Leu	Gly	Val	Thr	Val	Asp	Arg	Phe
	195						200					205			
Gly	Arg	Arg	Gly	Ile	Leu	Leu	Leu	Ser	Met	Thr	Leu	Thr	Gly	Ile	Ala
210					215						220				
Ser	Leu	Val	Leu	Leu	Gly	Leu	Trp	Asp	Cys	Glu	His	Pro	Ile	Phe	Pro
225				230					235					240	
Thr	Val	Trp	Ala	Gln	Gln	Gly	Asn	Pro	Asn	Arg	Asp	Leu	Asn	Glu	Ala
			245					250						255	
Ala	Ile	Thr	Thr	Phe	Ser	Val	Leu	Gly	Leu	Phe	Ser	Ser	Gln	Ala	Ala
		260					265						270		
Ala	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ala	Glu	Val	Ile	Pro	Thr	Thr	Val
	275					280						285			
Arg	Gly	Arg	Gly	Leu	Gly	Leu	Ile								
290					295										

<210> 3433

<211> 1257

<212> DNA

<213> Homo sapiens

<400> 3433

tgagctacac gcggagcngg gccgcaacag cggtctctcc cttcggccca gaggccagc
 60
 tcagtgcgcc cttcaccttc acctcgacct ctgccgggag ggagacagcg tccgcagaga
 120
 ccgagccact cccgttccca caccaggtcg aacttgaaaa gggacgtcgc ccacctgtac
 180
 cgaggagtcg gctcgcgcta catcatgggg tcaggagaat ctttcattgca gctgcagcag
 240
 cgtctctctga gagagaagga ggccaagatc aggaaggcct tggacaggct tcgcaagaag
 300
 aggcacctgc tccgccggca gcggacgagg cgggagttcc ccgtgatctc cgtgggtggg
 360
 tacaccaact gcggtgagca cgcgccagg ggaggggcct tccgcggtct ccgtgtcacc
 420
 ggtgaggact cgcgcggggg agggcagggg gtccctgtcg tctcagtggt gccgtacgac
 480

agctgcggtg agcacgtgcc caggagaggg gggtcccatg gtcgccgtgt ggggtacacc
 540
 agctgctgtg agagctcacc caggagacgg gtttctgtg gtctctgtgt ggggtacagc
 600
 agccaagggt aggatgtcat ctaccccatc ctcccatcca gagctttacc accctgtcta
 660
 taccacaacc tccctcccat ctacccatc ctctgtcta gaccatcccc actgccctat
 720
 ctataccacc accctgtcta cacaatccac ccatctacac catcacctct cctctgtcta
 780
 taccatctc ctgtctacac cagcaccact accccatcta taccaccacc cgtctacat
 840
 aatccacccg tgtacaccac aatgtccctc tegtctgcac cgtcctcctg tctacactgg
 900
 caccactgcc ccagctatac caccaccccg tctacataat ccacccatct gtctacacca
 960
 tcgctctctc tctgtctaca ccatcttctc gtcaacacgg gcaccactgc cgtatctata
 1020
 tccacccatc tacaccatca cctccctgtg gtctacacca tctcccatc cacaccagca
 1080
 ccaccacccc acctacacca tccaccatc tacgccattg ccaaacttac acagacgacc
 1140
 tcactcccat ccacgccttc acacgcacac ccgtccacac caccatctcc cccgtgtccg
 1200
 cacggcggcc ccgtccatc ggcccagaaa cagcgacggt ggctttgtcc cagcgt
 1257

<210> 3434

<211> 311

<212> PRT

<213> Homo sapiens

<400> 3434

Ala	Thr	Arg	Gly	Ala	Gly	Pro	Gln	Gln	Arg	Leu	Leu	Pro	Ser	Ala	Gln
1				5				10						15	
Arg	Pro	Ser	Ser	Val	Pro	Pro	Ser	Pro	Ser	Pro	Arg	Pro	Leu	Pro	Gly
			20					25					30		
Gly	Arg	Gln	Arg	Pro	Gln	Arg	Pro	Ser	His	Ser	Arg	Ser	His	Thr	Arg
		35					40					45			
Ser	Asn	Leu	Lys	Arg	Asp	Val	Ala	His	Leu	Tyr	Arg	Gly	Val	Gly	Ser
	50					55					60				
Arg	Tyr	Ile	Met	Gly	Ser	Gly	Glu	Ser	Phe	Met	Gln	Leu	Gln	Gln	Arg
	65				70					75				80	
Leu	Leu	Arg	Glu	Lys	Glu	Ala	Lys	Ile	Arg	Lys	Ala	Leu	Asp	Arg	Leu
				85					90					95	
Arg	Lys	Lys	Arg	His	Leu	Leu	Arg	Arg	Gln	Arg	Thr	Arg	Arg	Glu	Phe
			100						105					110	
Pro	Val	Ile	Ser	Val	Val	Gly	Tyr	Thr	Asn	Cys	Gly	Glu	His	Ala	Pro
		115						120				125			
Arg	Gly	Gly	Ala	Phe	Arg	Gly	Leu	Arg	Val	Thr	Gly	Glu	Asp	Ser	Pro
	130					135					140				
Gly	Gly	Gly	Gln	Gly	Val	Pro	Val	Val	Ser	Val	Val	Pro	Tyr	Asp	Ser
	145				150					155				160	
Cys	Gly	Glu	His	Val	Pro	Arg	Arg	Gly	Gly	Ser	His	Gly	Arg	Arg	Val

```

      165      170      175
Gly Tyr Thr Ser Cys Cys Glu Ser Ser Pro Arg Arg Arg Val Ser Cys
      180      185      190
Gly Leu Cys Val Gly Tyr Ser Ser Gln Gly Glu Asp Val Ile Tyr Pro
      195      200      205
Ile Leu Pro Ser Arg Ala Leu Pro Pro Cys Leu Tyr His Asn Leu Pro
      210      215      220
Ser Ile Tyr Thr Ile Leu Leu Ser Arg Pro Ser Pro Leu Pro Tyr Leu
      225      230      235      240
Tyr His His Pro Val Tyr Thr Ile His Pro Ser Thr Pro Ser Pro Leu
      245      250      255
Leu Cys Leu Tyr His Pro Pro Val Tyr Thr Ser Thr Thr Thr Pro Ser
      260      265      270
Ile Pro Pro Pro Arg Leu His Asn Pro Pro Val Tyr Thr Thr Met Ser
      275      280      285
Pro Ser Ser Ala Pro Ser Ser Cys Leu His Trp His His Cys Pro Ser
      290      295      300
Tyr Thr Thr Thr Pro Ser Thr
      305      310

```

<210> 3435

<211> 1225

<212> DNA

<213> Homo sapiens

<400> 3435

```

nnccactcct tgtatgacca ctggggcaag gaggatgaga acctgggtag cgtgaagcag
60
tatgtggaga gcatagacgt ttctctctac acggaggagt tcaacgtgtc ctgcctgaca
120
gacagcaatg ccgataccta ctgggagagc gatgggtccc agtgccaaca ctgggtacgg
180
cttactatga agaagggcac cattgtcaag aagctgtctac tcgcagtgga taccacagat
240
gacaacttta tgccaaagcg ggtgggtggtc tatgggggtg aaggggacaa cctgaagaag
300
ctgagtgacg tgagcattga cnngagaccc tcatcggggn atgtctgtgt cctggaggac
360
atgaccgtcc acctcccgat catcgagatc cgcacgtgg agtgccgaga tgatgggatt
420
gatgttcgtc tccgaggggt caagatcaag tcatctagac agcgggaact agggttgaat
480
gcagacctgt tccagccaac tagtctggtg cgatatccac gcctagaagg caccgacctt
540
gaagtactgt accgcagagc tgtcctcctg cagagattca tcaagatcct cgatagtgtc
600
ctgcaccacc tggtagcctg ctgggaccac aactgggca ccttcagtga gattaagcaa
660
gtgaagcagt tcctactgct gtcccgccag cggccaggcc tgggtggctc gtgcctgcgt
720
gactctgaga gcagcaagcc cagcttcatg ccacgcctat acatcaaccg ccgtcttgcc
780
atggaacacc gtgcctgccc ctctcgagac cctgcctgca agaatgcagt cttcaccag
840

```

gtatatgaag gcctcaagcc ctctgacaaa tatgaaaagc ccctggacta caggtggccc
 900
 atgcgctatg accagtgggtg ggagtgtaaa tttattgcag aaggcatcat tgaccaaggg
 960
 ggtgggtttcc gggacagcct ggcagatatg tcagaagagc tgtgccctag ctcagcggat
 1020
 acccccgctgc ccttgccttt ctttgtacgc acagccaacc agggcaatgg cactgggtgag
 1080
 gctcggggaca tgtatgtacc caaccctcc tgccgagact ttgccaagta tgaatggatc
 1140
 ggacagctga tgggggctgc ccttcgggggt aaggagtcc tggctctggc cctgcctggg
 1200
 tttgtgtgga agcagctttc tgcag
 1225

<210> 3436

<211> 408

<212> PRT

<213> Homo sapiens

<400> 3436

Xaa His Ser Leu Tyr Asp His Trp Gly Lys Glu Asp Glu Asn Leu Gly
 1 5 10 15
 Ser Val Lys Gln Tyr Val Glu Ser Ile Asp Val Ser Ser Tyr Thr Glu
 20 25 30
 Glu Phe Asn Val Ser Cys Leu Thr Asp Ser Asn Ala Asp Thr Tyr Trp
 35 40 45
 Glu Ser Asp Gly Ser Gln Cys Gln His Trp Val Arg Leu Thr Met Lys
 50 55 60
 Lys Gly Thr Ile Val Lys Lys Leu Leu Leu Ala Val Asp Thr Thr Asp
 65 70 75 80
 Asp Asn Phe Met Pro Lys Arg Val Val Val Tyr Gly Gly Glu Gly Asp
 85 90 95
 Asn Leu Lys Lys Leu Ser Asp Val Ser Ile Asp Xaa Arg Pro Ser Ser
 100 105 110
 Gly Xaa Val Cys Val Leu Glu Asp Met Thr Val His Leu Pro Ile Ile
 115 120 125
 Glu Ile Arg Ile Val Glu Cys Arg Asp Asp Gly Ile Asp Val Arg Leu
 130 135 140
 Arg Gly Val Lys Ile Lys Ser Ser Arg Gln Arg Glu Leu Gly Leu Asn
 145 150 155 160
 Ala Asp Leu Phe Gln Pro Thr Ser Leu Val Arg Tyr Pro Arg Leu Glu
 165 170 175
 Gly Thr Asp Pro Glu Val Leu Tyr Arg Arg Ala Val Leu Leu Gln Arg
 180 185 190
 Phe Ile Lys Ile Leu Asp Ser Val Leu His His Leu Val Pro Ala Trp
 195 200 205
 Asp His Thr Leu Gly Thr Phe Ser Glu Ile Lys Gln Val Lys Gln Phe
 210 215 220
 Leu Leu Leu Ser Arg Gln Arg Pro Gly Leu Val Ala Gln Cys Leu Arg
 225 230 235 240
 Asp Ser Glu Ser Ser Lys Pro Ser Phe Met Pro Arg Leu Tyr Ile Asn
 245 250 255
 Arg Arg Leu Ala Met Glu His Arg Ala Cys Pro Ser Arg Asp Pro Ala

260										265					270				
Cys	Lys	Asn	Ala	Val	Phe	Thr	Gln	Val	Tyr	Glu	Gly	Leu	Lys	Pro	Ser				
275										280					285				
Asp	Lys	Tyr	Glu	Lys	Pro	Leu	Asp	Tyr	Arg	Trp	Pro	Met	Arg	Tyr	Asp				
290										295					300				
Gln	Trp	Trp	Glu	Cys	Lys	Phe	Ile	Ala	Glu	Gly	Ile	Ile	Asp	Gln	Gly				
305						310				315					320				
Gly	Gly	Phe	Arg	Asp	Ser	Leu	Ala	Asp	Met	Ser	Glu	Glu	Leu	Cys	Pro				
325										330					335				
Ser	Ser	Ala	Asp	Thr	Pro	Val	Pro	Leu	Pro	Phe	Phe	Val	Arg	Thr	Ala				
340										345					350				
Asn	Gln	Gly	Asn	Gly	Thr	Gly	Glu	Ala	Arg	Asp	Met	Tyr	Val	Pro	Asn				
355										360					365				
Pro	Ser	Cys	Arg	Asp	Phe	Ala	Lys	Tyr	Glu	Trp	Ile	Gly	Gln	Leu	Met				
370										375					380				
Gly	Ala	Ala	Leu	Arg	Gly	Lys	Glu	Phe	Leu	Val	Leu	Ala	Leu	Pro	Gly				
385					390					395					400				
Phe	Val	Trp	Lys	Gln	Leu	Ser	Ala												
405																			

<210> 3437

<211> 2081

<212> DNA

<213> Homo sapiens

<400> 3437

gtggccccag	aaaagtcagt	gtgtaggcct	cagccacttc	aggtccggcg	tacattctcc
60					
ctggacacca	tcctcagctc	ctaccttctg	ggccagtgca	cgagatgctg	atggggcctt
120					
cacctgctgc	accatcgaca	agggcaccca	gacgcccctg	tcctggcaag	agctagaagg
180					
tgagcgtgcc	agttcctgtg	cacacaagcg	ctcagcatcc	tggggcagca	cagaccaccg
240					
aaaagagatt	tccaagttga	agcaacaact	gcagaggacg	aagctgagcc	gcagtgggaa
300					
agagaaggag	cgaggttcac	cactcctagg	ggaccacgca	gtgcggggag	cactgagggc
360					
gtccccctcc	agcttcccct	caggggtccc	tgtcttgcca	ctcagcccct	gcctgcacag
420					
gagcctggaa	gggctcaacc	aagagctgga	ggaggtattt	gtgaaggagc	agggagaaga
480					
ggagctgctg	aggatccttg	atatccctga	tgggcaccgg	gccccagctc	ctccccagag
540					
tggcagctgt	gatcatcccc	tcctcctcct	gagcctggca	accttgccag	ctctccttcc
600					
atgtccttgg	catctcccca	gcctgtggcc	tggccagtc	tgaggaacat	cgggggtgccg
660					
ccgaggagct	ggcatccacc	cccaacgaca	aagcctcctc	tccaggacac	ccagccttcc
720					
ttgaagatgg	cagcccatct	ccagtctctg	cctttgctgc	ctccccctcg	cctaatacata
780					
gctacatctt	caaacgggag	cccccagaag	gctgtgagaa	agtgcgtgtg	tttgaagaag
840					

ccancgtctc caggctcctga cctggccttc ctgacttcct gtcttgacaa gaacaaagtc
 900
 catttcaacc cgactggctc accttctgcc ccgtcaacct gatgaagccc ctcttccccg
 960
 gcatgggctt catctcgtaa ctgcccctca aaccgggat ctccccctcc cccggccagc
 1020
 cccaggccac cacctcggaa ggatccggaa gcctccaagg cctccccact gccattcgag
 1080
 ccatggcagc gcacccacc atcagaagag cctgtgcttt tccagagctc cctgatggtc
 1140
 tgagggtccc acccctgccc cactttacca tagagaccag tgccttggtg gcaggctcct
 1200
 ccccaggctc cctgagatgg ggtatggagg ggcccttccc tctcggcctt cgagcacttt
 1260
 ctttcaacta ctgtgtcaaa gccctgggtc ctctttttga tgggcaccgg cccctctgaa
 1320
 cgtgatggga cctgccttct ccactagtag ctgggcagct cacaattcac acctgtgtac
 1380
 ctgccacatc cctcacttgg tggaaaacac ccagaaggct ttgagtcccc caccctggg
 1440
 tgtcagtcca aatgactgta taggaggccc ttatttttgt cacagagcaa gctggccatg
 1500
 aacgaaggag agaagacgcc acagatttcc ttccctctcc tccaggagac cataagatag
 1560
 atccccatc ctctcagccc tattcccatg cctccctctc attggaggag ctgaccaaag
 1620
 cagccctaac gggccataac acttgaccaa ttcagctgct ggcagaggga ggaaacaagt
 1680
 gttttcccaa gtggcatttt catctcgctt tcaccctgac taaagattgt cttaagtagc
 1740
 agcccagccc gcccagcccc aggtgggtag tggggaggag agctggcatt cctccagggtg
 1800
 gcaaatggcg actctatact ctccgcccgc cccagggctg gatggattag aaaaatgcct
 1860
 atttttcttg tatcgatgta gagactctat tttctccaa agacactatt tttgcagctg
 1920
 tttgaagttt gtatatatttc cgtactgcag agcttacaca aaattgaaga atgttaatgt
 1980
 tcgagtttcc ttatcttggtg tttagagggt gttttttgca gatcttggtg ttaatagacc
 2040
 aaataaataa ataaatattc ccagcaaaaa aaaaaaaaaa a
 2081

<210> 3438

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3438

Ala	Cys	Gln	Phe	Leu	Cys	Thr	Gln	Ala	Leu	Ser	Ile	Leu	Gly	Gln	His
1				5					10					15	
Arg	Pro	Pro	Lys	Arg	Asp	Phe	Gln	Val	Glu	Ala	Thr	Thr	Ala	Glu	Asp
			20					25					30		
Glu	Ala	Glu	Pro	Gln	Trp	Glu	Arg	Glu	Gly	Ala	Arg	Phe	Thr	Thr	Pro

		35					40					45				
Arg	Gly	Pro	Arg	Ser	Ala	Gly	Ser	Thr	Glu	Gly	Val	Pro	Ser	Gln	Leu	
	50					55					60					
Pro	Leu	Arg	Val	Pro	Cys	Leu	Ala	Thr	Gln	Pro	Leu	Pro	Ala	Gln	Glu	
65					70					75					80	
Pro	Gly	Arg	Ala	Gln	Pro	Arg	Ala	Gly	Gly	Gly	Ile	Cys	Glu	Gly	Ala	
			85						90					95		
Gly	Arg	Arg	Gly	Ala	Ala	Glu	Asp	Pro								
		100					105									

```
<210> 3439
<211> 1519
<212> DNA
<213> Homo sapiens
```

```

<400> 3439
acgcgtccac cattagcgag ccggctccgg ctaatacaaa tatttactgg gcggctctga
60
ctcacccgcgc ctcgcctcgc tccgccggcg ccgcggcatg ctgggatatg tagtccccac
120
ggggcgccgg gcgccccggg ggagcggggc cggcaccccta ggggacgcaa agccccggga
180
aggggcccggc ggaggggaggc cggagcgggc agcgcgcgcg cgccatgtcc gtgaacatgg
240
acgagctcaa gcaccaggtc atgatcaacc agttcgtgct gacggcgggc tgcgcggccg
300
accaggcgaa gcaactgctg caggcgggcc actggcagtt cgagacagcc ctcagcgcc
360
ttttccagga gaccaacatc ccctacagcc accatcacca ccagatgatg tgcacccccg
420
ccaatacccc tgctacaccc cccaacttcc ctgacgctct caccatgttc tcccgctc
480
aggcctccga gagcttccac agcggtgcca gcggcagccc gatggccggc acagccacgt
540
cacccccgcg caacttcccc catgcgcgca ccagcagctc tgcggcctcc agctggccca
600
cggcggcctc gcnccecggg gggcccacag caccaccagc cacagccgcc cctgtggact
660
ccaacacccc cttctccggc ttcagactgg ccacccctgc cccccaacag gccacctcag
720
aaccaggggc ccaccctgcc atggaggcag agagataagg gagggccctc cccctcccg
780
gaggccagga ccccgtaggg cgggggagag gacgtctctg cgggccccct tnnacccct
840
tttctgtctg cacccttgt tccccggagc cctggagggg agagcgcgga ctctagccag
900
gcagggacac gtctggtgcc agaacacgca gctgcccaca cgcaaggcca tggccccagc
960
ggccccggca catggagtgg ttcagagcgg cctgggtgcc tggcggacag aacttcagag
1020
accacgcagc cttccttcga agacgcacct gccagccca gcccaggggt gccgtggagg
1080
accacccctg cgagacatt gctgatccct ggcttggagc tccttggggg ccggcaggcc
1140

```

tcgacccccca ccctaggggaa tgcagagcct ctccgcatgt gtgcgcgtgg ccgtgtctgt
 1200
 gtattttctac gtgtgtcgtct cttcagaagc aacctagttc ctggggcagc tggactttgc
 1260
 atgttagtgt gagccccag cccctgccc gccgcccct cccagggcc ctgcctcttc
 1320
 cccacccct cgtcagccag cgttgctgtt ccttgacagag aaaaggattg tgggaaactc
 1380
 caggactctt cccaccgct cccagcgcct gcctgctggg gctgcctgca tgcctccctc
 1440
 gcacctgggg gtaccgcgcat ccacttcctt tccccctttt aacaaaagag aagaacgaat
 1500
 tccaaaccaa aaaaaaaaaa
 1519

<210> 3440

<211> 287

<212> PRT

<213> Homo sapiens

<400> 3440

Cys	Ala	Pro	Pro	Ile	Pro	Leu	Leu	His	Pro	Pro	Thr	Ser	Leu	Thr
1			5				10					15		
Leu	Ser	Pro	Cys	Ser	Pro	Val	Ser	Arg	Pro	Pro	Arg	Ala	Ser	Thr
		20					25					30		Ala
Val	Ala	Ala	Ala	Ala	Arg	Trp	Pro	Arg	Gln	Pro	Arg	His	Pro	Arg
		35					40					45		His
Thr	Ser	Pro	Met	Pro	Pro	Pro	Ala	Ala	Leu	Arg	Pro	Pro	Ala	Gly
		50				55					60			Pro
Arg	Arg	Pro	Arg	Xaa	Pro	Gly	Gly	Pro	Gln	His	His	Gln	Pro	Gln
		65			70				75				80	Pro
Pro	Leu	Trp	Thr	Pro	Thr	Pro	Pro	Ser	Pro	Ala	Ser	Asp	Trp	Pro
			85					90					95	Pro
Leu	Pro	Pro	Asn	Arg	Pro	Pro	Gln	Asn	Pro	Gly	Pro	Thr	Leu	Pro
		100					105					110		Trp
Arg	Gln	Arg	Asp	Lys	Gly	Gly	Pro	Ser	Pro	Leu	Pro	Glu	Ala	Arg
		115					120					125		Thr
Pro	Trp	Gly	Gly	Gly	Glu	Asp	Val	Ser	Ala	Gly	Pro	Leu	Xaa	Thr
		130				135					140			Pro
Phe	Leu	Ser	Ala	Pro	Leu	Val	Pro	Arg	Ser	Pro	Gly	Gly	Glu	Ser
		145			150				155				160	Ala
Asp	Ser	Ser	Gln	Ala	Gly	Thr	Arg	Leu	Val	Pro	Glu	His	Ala	Ala
			165					170					175	Ala
His	Thr	Gln	Gly	His	Gly	Pro	Ser	Gly	Pro	Gly	Thr	Trp	Ser	Gly
		180						185				190		Ser
Glu	Arg	Pro	Gly	Cys	Leu	Ala	Asp	Arg	Thr	Ser	Glu	Thr	Thr	Gln
		195					200					205		Pro
Ser	Phe	Glu	Asp	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Gly	Val	Pro	Trp
		210				215					220			Arg
Thr	Thr	Leu	Ala	Glu	Thr	Leu	Leu	Ile	Pro	Gly	Leu	Glu	Leu	Gly
		225			230				235				240	
Gly	Arg	Gln	Ala	Ser	Thr	Pro	Thr	Leu	Gly	Asn	Ala	Glu	Pro	Leu
			245					250				255		Arg
Met	Cys	Ala	Arg	Gly	Arg	Val	Cys	Val	Phe	Leu	Arg	Val	Ser	Leu
														Phe

cccagcccg cagaggtgc ggagacgcc gccctggagc tgccctccc cagcgtgccc
 1380
 gccctgccc cgtctgagg gccctccaga cctgctcggg tgctggggcc atgccgagtc
 1440
 gcggccctgc tcagccggaa gaggtcccg gacctggatg tacagggcag tctctcttcc
 1500
 cggggctatg gctgggcctg tctgcccgtc atggccccc gcttcttct ccttggagct
 1560
 ggctcccga ccttgccccc catccatgca gtggtccca gggcagagcc tctccttgta
 1620
 ctttggcagc catagaaagc gtgctcattt tctgttttcc tgtgttagga aaaaaccacc
 1680
 tgttttccaa ggggagaggg cggggcctga ggggtggggc ggggcctctt cattggccca
 1740
 gcttggcgaa agcagggcac actgcttact gccttggggg tgtggagatg gaccctgac
 1800
 ctggtggagg ccgtgtgggg gcagcagcct ggctgtgcc atggtgggtg tcttggggcc
 1860
 tgtgaggagg gagccacctc accctgcagc ccagtttgca ggtgtggcct tgtttctcct
 1920
 tgccagcag tgctgccttc agcgcccggt acggggccag ctggacacac ggtgagattt
 1980
 tctcgtatgt aaataaaagg caatttggtg aacgtggaaa aaaaaaaaaa aaaaaaaaaa
 2040
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2074

<210> 3442

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3442

Met	Val	Gly	Lys	Asn	Val	Lys	Leu	Tyr	Asp	Met	Val	Leu	Gln	Phe	Leu
1				5					10					15	
Arg	Thr	Leu	Phe	Leu	Arg	Thr	Arg	Asn	Val	His	Tyr	Cys	Thr	Leu	Arg
		20						25					30		
Ala	Glu	Leu	Leu	Met	Ser	Leu	His	Asp	Leu	Asp	Val	Gly	Glu	Ile	Cys
		35					40					45			
Thr	Val	Asp	Pro	Cys	His	Lys	Phe	Thr	Trp	Cys	Leu	Asp	Ala	Cys	Ile
	50					55				60					
Arg	Glu	Arg	Phe	Val	Asp	Ser	Lys	Arg	Ala	Arg	Glu	Leu	Gln	Gly	Phe
65				70					75					80	
Leu	Asp	Asp	Val	Lys	Lys	Gly	Gln	Glu	Gln	Val	Leu	Gly	Asp	Leu	Ser
				85				90					95		
Met	Ile	Leu	Cys	Asp	Pro	Phe	Ala	Ile	Asn	Thr	Leu	Ala	Leu	Ser	Thr
		100						105					110		
Val	Arg	His	Leu	Gln	Glu	Leu	Val	Gly	Gln	Glu	Thr	Leu	Pro	Arg	Asp
		115					120					125			
Ser	Pro	Asp	Leu	Leu	Leu	Leu	Arg	Leu	Leu	Ala	Leu	Gly	Gln	Gly	
	130					135				140					
Ala	Trp	Asp	Met	Ile	Asp	Ser	Gln	Val	Phe	Lys	Glu	Pro	Lys	Met	Glu
145				150					155					160	
Val	Glu	Leu	Ile	Thr	Arg	Phe	Leu	Pro	Met	Leu	Met	Ser	Phe	Leu	Val

```

      165      170      175
Asp Asp Tyr Thr Phe Asn Val Asp Gln Lys Leu Pro Ala Glu Glu Lys
      180      185      190
Ala Pro Val Ser Tyr Pro Asn Thr Leu Pro Glu Ser Phe Thr Lys Phe
      195      200      205
Leu Gln Glu Gln Arg Met Ala Cys Glu Val Gly Leu Tyr Tyr Val Leu
      210      215      220
His Ile Thr Lys Gln Arg Asn Lys Asn Ala Leu Leu Arg Leu Leu Pro
      225      230      235
Gly Leu Val Glu Thr Phe Gly Asp Leu Ala Phe Gly Asp Ile Phe Leu
      245      250      255
His Leu Leu Thr Gly Asn Leu Ala Leu Leu Ala Asp Glu Phe Ala Leu
      260      265      270
Glu Asp Phe Cys Ser Ser Leu Phe Asp Gly Phe Phe Leu Thr Ala Ser
      275      280      285
Pro Arg Lys Glu Asn Val His Arg His Ala Leu Arg Leu Leu Ile His
      290      295      300
Leu His Pro Arg Val Ala Pro Ser Lys Leu Glu Ala Leu Gln Lys Ala
      305      310      315
Leu Glu Pro Thr Gly Gln Ser Gly Glu Ala Val Lys Glu Leu Tyr Ser
      325      330      335
Gln Leu Gly Glu Lys Leu Glu Gln Leu Asp His Arg Lys Pro Ser Pro
      340      345      350
Ala Gln Ala Ala Glu Thr Pro Ala Leu Glu Leu Pro Leu Pro Ser Val
      355      360      365
Pro Ala Pro Ala Pro Leu
      370

```

<210> 3443

<211> 2070

<212> DNA

<213> Homo sapiens

<400> 3443

```

ctggccgtaa atgccgagga ggacgcctgg ttacgggcac aggtcatctc aacagaagag
60
aacaaaataa aggtatgcta tgttgactat ggttttagtg aaaatgttga aaaaagcaaa
120
gcatacaaat taaacccgaa gttttgttca ctctcatttc aagctacaaa atgtaagctt
180
gcaggcttgg aagtcctaag cgatgaccct gatctagtga aggtgggtga atctttaact
240
tgtggaaaga tctttgcagt ggaaatactt gacaaagctg acattccact tgttgttctg
300
tacgatacct caggagaaga tgatatcaat atcaatgcca cctgcttgaa ggctatatgt
360
gacaagtcac tagaggttca cctgcagggt gacgccatgt acacaaatgt caaaataact
420
aatatttgct ctgatgggac actctactgc cagggtgcctt gtaagggtct gaacaagctc
480
agtgccttc tacgtaagat agaggactac ttccattgca agcacatgac ctctgagtgc
540
tttgtttcat tacccttctg tgggaaaatc tgccctctcc attgcaaagg aaaatgggta
600

```

cgagtagaga tcacaaatgt tcacagcagc cgggctcttg atgttcagtt cctggactct
660
ggcactgtga catctgtaaa agtgtcagag ctcagggaaa ttccacctcg gtttctacaa
720
gaaatgattg caataccacc tcaggccatt aagtgtgtt tagcagatct tccacaatct
780
attggcatgt ggacaccaga tgcagtgtg tggttaagag attctgtttt gaattgtctg
840
gactgtagca ttaaggttac aaaagtggat gaaaccagag ggatcgcaca tgtttattta
900
tttacccta agaacttccc tgacctcat cgcagtatta atcgccagat tacaaatgca
960
gacttgtgga agcatcagaa ggatgtgtt ttgagtgcc tatccagtgg agctgactct
1020
cccaacagca aaaatggcaa catgcccatt tcgggcaaca ctggagagaa tttcagaaag
1080
aacctcacag atgtcatcaa aaagtccatg gtggaccata cgagcgcttt ctccacagag
1140
gaactgccac ctctgtcca cttatcaaag ccaggggaac acatggatgt gtatgtgcct
1200
gtggcctgtc acccaggcta cttcgtcatc cagccttggc aggagatata taagttggaa
1260
gttctgatgg aagagatgat tctatattac agcgtgtctg aagagcgcca catagcagtg
1320
gagaaagacc aagtgtatgc tgcaaaagt gaaaataagt ggcacagggt gcttttaaaa
1380
ggaatcctga ccaatggact ggtatctgtg tatgagctgg attatggcaa acacgaatta
1440
gtcaacataa gaaaagtaca gcccttagtg gacatgttcc gaaagctgcc cttccaagca
1500
gtcacagctc aacttgcagg agtgaagtgc aaccagtggc ctgaggaggc ttctatgggtg
1560
tttcgaaatc atgtggagaa gaaacctctg gtggcactgg tgcagacagt cattgaaat
1620
gctaaccctt gggaccggaa agtagtggc tacttagtgg acacatcgtt gccagacacc
1680
gataacctga ttcattgatt tatgtcagag tatctgatag agctttcaaa agttaattaa
1740
tgactgcctc tgaaaccttg acaactaatt cagatttttt agcaataaca aaatgtagta
1800
ggcttaaaaa aaatcttaac tctgtacat ggctctgact gctgtggggg attgaaaaga
1860
atatgcttat gtttgatgaa agatatttaa caagttttgt tttaacagag ttgacttttc
1920
aaagaaaatt gtacttgaat tattactata atattagaat aaaaatgttt atcaatataa
1980
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2040
aaaaaaaaa aaaaaaaaaa aaaaaagggg
2070

<210> 3444

<211> 579

<212> PRT

<213> Homo sapiens

<400> 3444

```

Leu Ala Val Asn Ala Glu Glu Asp Ala Trp Leu Arg Ala Gln Val Ile
 1           5           10           15
Ser Thr Glu Glu Asn Lys Ile Lys Val Cys Tyr Val Asp Tyr Gly Phe
      20           25           30
Ser Glu Asn Val Glu Lys Ser Lys Ala Tyr Lys Leu Asn Pro Lys Phe
      35           40           45
Cys Ser Leu Ser Phe Gln Ala Thr Lys Cys Lys Leu Ala Gly Leu Glu
      50           55           60
Val Leu Ser Asp Asp Pro Asp Leu Val Lys Val Val Glu Ser Leu Thr
      65           70           75           80
Cys Gly Lys Ile Phe Ala Val Glu Ile Leu Asp Lys Ala Asp Ile Pro
      85           90           95
Leu Val Val Leu Tyr Asp Thr Ser Gly Glu Asp Asp Ile Asn Ile Asn
      100          105          110
Ala Thr Cys Leu Lys Ala Ile Cys Asp Lys Ser Leu Glu Val His Leu
      115          120          125
Gln Val Asp Ala Met Tyr Thr Asn Val Lys Ile Thr Asn Ile Cys Ser
      130          135          140
Asp Gly Thr Leu Tyr Cys Gln Val Pro Cys Lys Gly Leu Asn Lys Leu
      145          150          155          160
Ser Asp Leu Leu Arg Lys Ile Glu Asp Tyr Phe His Cys Lys His Met
      165          170          175
Thr Ser Glu Cys Phe Val Ser Leu Pro Phe Cys Gly Lys Ile Cys Leu
      180          185          190
Phe His Cys Lys Gly Lys Trp Leu Arg Val Glu Ile Thr Asn Val His
      195          200          205
Ser Ser Arg Ala Leu Asp Val Gln Phe Leu Asp Ser Gly Thr Val Thr
      210          215          220
Ser Val Lys Val Ser Glu Leu Arg Glu Ile Pro Pro Arg Phe Leu Gln
      225          230          235          240
Glu Met Ile Ala Ile Pro Pro Gln Ala Ile Lys Cys Cys Leu Ala Asp
      245          250          255
Leu Pro Gln Ser Ile Gly Met Trp Thr Pro Asp Ala Val Leu Trp Leu
      260          265          270
Arg Asp Ser Val Leu Asn Cys Ser Asp Cys Ser Ile Lys Val Thr Lys
      275          280          285
Val Asp Glu Thr Arg Gly Ile Ala His Val Tyr Leu Phe Thr Pro Lys
      290          295          300
Asn Phe Pro Asp Pro His Arg Ser Ile Asn Arg Gln Ile Thr Asn Ala
      305          310          315          320
Asp Leu Trp Lys His Gln Lys Asp Val Phe Leu Ser Ala Ile Ser Ser
      325          330          335
Gly Ala Asp Ser Pro Asn Ser Lys Asn Gly Asn Met Pro Met Ser Gly
      340          345          350
Asn Thr Gly Glu Asn Phe Arg Lys Asn Leu Thr Asp Val Ile Lys Lys
      355          360          365
Ser Met Val Asp His Thr Ser Ala Phe Ser Thr Glu Glu Leu Pro Pro
      370          375          380
Pro Val His Leu Ser Lys Pro Gly Glu His Met Asp Val Tyr Val Pro
      385          390          395          400
Val Ala Cys His Pro Gly Tyr Phe Val Ile Gln Pro Trp Gln Glu Ile

```

405 410 415
 His Lys Leu Glu Val Leu Met Glu Glu Met Ile Leu Tyr Tyr Ser Val
 420 425 430
 Ser Glu Glu Arg His Ile Ala Val Glu Lys Asp Gln Val Tyr Ala Ala
 435 440 445
 Lys Val Glu Asn Lys Trp His Arg Val Leu Leu Lys Gly Ile Leu Thr
 450 455 460
 Asn Gly Leu Val Ser Val Tyr Glu Leu Asp Tyr Gly Lys His Glu Leu
 465 470 475 480
 Val Asn Ile Arg Lys Val Gln Pro Leu Val Asp Met Phe Arg Lys Leu
 485 490 495
 Pro Phe Gln Ala Val Thr Ala Gln Leu Ala Gly Val Lys Cys Asn Gln
 500 505 510
 Trp Ser Glu Glu Ala Ser Met Val Phe Arg Asn His Val Glu Lys Lys
 515 520 525
 Pro Leu Val Ala Leu Val Gln Thr Val Ile Glu Asn Ala Asn Pro Trp
 530 535 540
 Asp Arg Lys Val Val Val Tyr Leu Val Asp Thr Ser Leu Pro Asp Thr
 545 550 555 560
 Asp Thr Trp Ile His Asp Phe Met Ser Glu Tyr Leu Ile Glu Leu Ser
 565 570 575
 Lys Val Asn

<210> 3445

<211> 2086

<212> DNA

<213> Homo sapiens

<400> 3445

nnacgcgtgg cggcagaggg tatccaaggc cggacctggc ggcgaggcgc tgacccgacc
 60
 tggcagtgag ctggccgcgg ccttggctga gaggccttaa ccccgccggg cggcgcgcg
 120
 cctgcatgcg agttggggccg cggggcgggt tggagcctac tcggggcgac tgcgatggac
 180
 gccttagaag gagagagctt tgcgctgtct ttctcctccg cctctgatgc agaatttgat
 240
 gctgtggttg gatatttaga ggacattatc atggatgacg agttccagtt attacagaga
 300
 aatttcattg acaagtacta cctggagttt gaagacacag aagagaataa actcatctac
 360
 acacctatct ttaatgaata catttccttg gtagaaaaat acattgaaga acagctgctg
 420
 cagcggatcc ctgagttcaa catggcagcc ttcaccacaa cattacacca tctgttccgt
 480
 ttgaggcacc ataaggatga agtggctggg gacatattcg acatgctgct caccttcaca
 540
 gattttcttg cttttaaaga aatgtttttg gactacagag cagaaaaaga aggccgagga
 600
 ctggacttaa gcagtggctt agtgggtgact tcattgtgca aatcatcttc tctgccagct
 660
 tcccagaaca atctgcggca ctaggtccta cctccagcca atgaatggga tcattctgga
 720

tgtcaccagc ccaataggct cagctcatga tgacagaaca catcttggaa agactgactc
780
tgttatgtaa ctcttcattt atgttaagta ttaataggtc aaaacaaaaa tgacctaac
840
ctcctggacc tatttatcct gaaacacctt cttgtattca ttaaccatag tactcctccc
900
cacctcaagt agacacctct ctcaggagct tctgagtcag acgcctctgg agcgagccct
960
atgtcaggca ctccacctgg ggggcccttc ccagcatac ctgctggtgt gtaagtgtgg
1020
actaacccgc cgccaccacc ctctgttcca gcaggctctg catgaatctt tgtgcacttg
1080
cacctctttt tcacatgggc cacagtttca gtacttcagc ctcagtgggg ttcttgatgt
1140
ttatctaggg tgttactcaa gccagtttg agattttgga gtctcctgtg atcacatctt
1200
gtctcggctg taggaatcaa cagaaggaga cgtcctctac ataaaagctc catgtgaaaa
1260
gtactccta gtcttaacat ttgcagtcct tgtgtcactg tcttctggtc ctgatgtagt
1320
cccactgttt ctagaagtct cttttaagca ttatttttga aaaaaaaaaa atttttatag
1380
atgaatactc aggctaacct agtggatgtg atcttggaa ttccatgatt atccacttaa
1440
agatcaaagt attatatgct gtgtgctttt taggtgtttg ttagtactgt gaaggcaaaa
1500
atgctttcta cattgacatt cattcctatt ttactgggca cctatgaatg tatgctgtgt
1560
gctagaata gactaaaaca tattcctata gcatgttagt gtgtttgcat gtttgctgaa
1620
aatcctttgt gtataaacca gtttgtaagg ttctctgggt taggtagga ctctgcagtt
1680
tcttctgtc aaaatctctc ctaccaagat ggtgttccac tgtccagccc agcatgagta
1740
gcaggtagag cacagcttta ctggctgttt gtatgctttg gtttagtgca atgtgtggta
1800
gattacttat cagaaaacat atatgtcatc tctagaacga agaaaaagca tagtagttca
1860
attcccagtg tgtccctttg attttttttt tttaatagta aaaataagaa tctgtactga
1920
cttttcactt ggccattctg gttttaaagg acaagctaca agctctgtgt ttctgtactg
1980
atgtgtcact tattaataac ttttgtacca tgagtataaac ttcagggtgt tcgcaagaac
2040
caccattctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2086

<210> 3446

<211> 169

<212> PRT

<213> Homo sapiens

<400> 3446

Met Asp Ala Leu Glu Gly Glu Ser Phe Ala Leu Ser Phe Ser Ser Ala

```

      1             5             10             15
Ser Asp Ala Glu Phe Asp Ala Val Val Gly Tyr Leu Glu Asp Ile Ile
      20             25             30
Met Asp Asp Glu Phe Gln Leu Leu Gln Arg Asn Phe Met Asp Lys Tyr
      35             40             45
Tyr Leu Glu Phe Glu Asp Thr Glu Glu Asn Lys Leu Ile Tyr Thr Pro
      50             55             60
Ile Phe Asn Glu Tyr Ile Ser Leu Val Glu Lys Tyr Ile Glu Glu Gln
      65             70             75             80
Leu Leu Gln Arg Ile Pro Glu Phe Asn Met Ala Ala Phe Thr Thr Thr
      85             90             95
Leu His His Leu Phe Arg Leu Arg His His Lys Asp Glu Val Ala Gly
      100            105            110
Asp Ile Phe Asp Met Leu Leu Thr Phe Thr Asp Phe Leu Ala Phe Lys
      115            120            125
Glu Met Phe Leu Asp Tyr Arg Ala Glu Lys Glu Gly Arg Gly Leu Asp
      130            135            140
Leu Ser Ser Gly Leu Val Val Thr Ser Leu Cys Lys Ser Ser Ser Leu
      145            150            155            160
Pro Ala Ser Gln Asn Asn Leu Arg His
      165

```

<210> 3447

<211> 936

<212> DNA

<213> Homo sapiens

<400> 3447

```

acgcgtgaag gggttgccggg gaagatggag tatcccgccg cggccacggt gcaggccgag
60
gacggcggag cggccggggc ttacagcagc tcggagttgc tggagggcca ggagccggac
120
ggggtgcgct ttgaccgcga gaggcgccgc cgcctgtggg aagccgtgtc cgggtgccag
180
ccggtgggta gagaggaagt ggagcacatg atccagaaga accaatgtct cttaccaaac
240
accagtgta aggtttgctg cgccttgctt atttctgagt cccagaagct ggcacattac
300
cagagcaaaa aacatgccaa caaagtgaag agatacctag caatccatgg aatggagaca
360
ttaaaggggg aaacgaagaa gctagactca gatcagaaga gcagcagaag caaagacaag
420
aaccagtgct gcccacatctg taacatgacc ttttcctccc ctgtcgtggc ccagtcgcac
480
tacctgggga agaccacgc aaagaactta aagctgaagc agcagtcac taaggtggaa
540
gccttgacc agaatagaga gatgatagac ccagacaagt tctgcagcct ctgccatgca
600
actttcaacg accctgtcat ggctcaacaa cattatgtgg gcaagaaaca cagaaaacag
660
gagaccaagc tcaaactaat ggcacgctat gggcggctgg cggaccctgc tgtcactgac
720
ttccagctg gaaagggcta cccctgcaaa acatgtaaga tagtgctgaa ctccatagaa
780

```

cagtaccaag ctcatgtcag eggcttcaaa cacaagaacc agtcaccaa aacagtggca
 840
 tcatccctgg gccagattcc aatgcaaagg caaccattc agaaagactc aaccaccttg
 900
 gaagactaga ggtgattctg cccagcatcc catatt
 936

<210> 3448

<211> 302

<212> PRT

<213> Homo sapiens

<400> 3448

Thr	Arg	Glu	Gly	Phe	Ala	Gly	Lys	Met	Glu	Tyr	Pro	Ala	Pro	Ala	Thr
1				5					10					15	
Val	Gln	Ala	Ala	Asp	Gly	Gly	Ala	Ala	Gly	Pro	Tyr	Ser	Ser	Ser	Glu
			20					25					30		
Leu	Leu	Glu	Gly	Gln	Glu	Pro	Asp	Gly	Val	Arg	Phe	Asp	Arg	Glu	Arg
		35					40					45			
Ala	Arg	Arg	Leu	Trp	Glu	Ala	Val	Ser	Gly	Ala	Gln	Pro	Val	Gly	Arg
		50				55					60				
Glu	Glu	Val	Glu	His	Met	Ile	Gln	Lys	Asn	Gln	Cys	Leu	Phe	Thr	Asn
65				70					75						80
Thr	Gln	Cys	Lys	Val	Cys	Cys	Ala	Leu	Leu	Ile	Ser	Glu	Ser	Gln	Lys
			85					90						95	
Leu	Ala	His	Tyr	Gln	Ser	Lys	Lys	His	Ala	Asn	Lys	Val	Lys	Arg	Tyr
			100					105					110		
Leu	Ala	Ile	His	Gly	Met	Glu	Thr	Leu	Lys	Gly	Glu	Thr	Lys	Lys	Leu
		115					120					125			
Asp	Ser	Asp	Gln	Lys	Ser	Ser	Arg	Ser	Lys	Asp	Lys	Asn	Gln	Cys	Cys
		130				135					140				
Pro	Ile	Cys	Asn	Met	Thr	Phe	Ser	Ser	Pro	Val	Ala	Gln	Ser	His	
145				150					155					160	
Tyr	Leu	Gly	Lys	Thr	His	Ala	Lys	Asn	Leu	Lys	Leu	Lys	Gln	Gln	Ser
			165					170						175	
Thr	Lys	Val	Glu	Ala	Leu	His	Gln	Asn	Arg	Glu	Met	Ile	Asp	Pro	Asp
		180					185						190		
Lys	Phe	Cys	Ser	Leu	Cys	His	Ala	Thr	Phe	Asn	Asp	Pro	Val	Met	Ala
		195					200					205			
Gln	Gln	His	Tyr	Val	Gly	Lys	Lys	His	Arg	Lys	Gln	Glu	Thr	Lys	Leu
		210				215					220				
Lys	Leu	Met	Ala	Arg	Tyr	Gly	Arg	Leu	Ala	Asp	Pro	Ala	Val	Thr	Asp
225				230					235					240	
Phe	Pro	Ala	Gly	Lys	Gly	Tyr	Pro	Cys	Lys	Thr	Cys	Lys	Ile	Val	Leu
			245					250					255		
Asn	Ser	Ile	Glu	Gln	Tyr	Gln	Ala	His	Val	Ser	Gly	Phe	Lys	His	Lys
		260					265						270		
Asn	Gln	Ser	Pro	Lys	Thr	Val	Ala	Ser	Ser	Leu	Gly	Gln	Ile	Pro	Met
		275					280					285			
Gln	Arg	Gln	Pro	Ile	Gln	Lys	Asp	Ser	Thr	Thr	Leu	Glu	Asp		
	290					295					300				

<210> 3449

<211> 877

<212> DNA

<213> Homo sapiens

<400> 3449

```

ntgatcttca gcaaccatca ccaccgcta cagctgaagg cagctccggc ctctccaat
60
ccccccggcg ccccggtctt gccgctgcac aattcctccg tgaactgcaa ctcccagtcc
120
ccggcccttc tggccggcac caaccccggt gctgtcgtcg cggatggagg cagttgcccc
180
gcacactacc cgggtgcacga gtgcgtcttc aagggggatg tgaggagact ctctctcttc
240
atccgcacgc acaatatcgg gcagaaagat aatcacggaa atactccttt acaccttgct
300
gtgatgttag gaaataaaga atgtgcccac ttacttttgg ctcaaatgc tccagtcaag
360
gtgaaaaatg ctcagggatg gagccctctg gcggaagcca tcagctatgg agataggcag
420
atgattacag ctcttttgag gaagcttaag cagcaatcca gggaaagtgt tgaagaaaaa
480
cgacctcgat tattaagaag cctgaaagag ctagggtgact tttatctaga acttcactgg
540
gattttcaaa gctgggtgcc ttacttttcc cgaattctgc cttccgatgc atgtaaaata
600
tacaacaag gtatcaatat caggcttgac acaactctca tagactttac tgacatgaag
660
tgccaacgag gggatctaag cttcatcttc aatggggatg cggcgccctc tgaatctttt
720
gtagtattag acaatgaaca aaaagtttat cagcgaatac atcatgaggc tcacatccca
780
ggaatcagag atggaacag aagaagaggt ggatatttta atgagcagtg atatttactc
840
tgcaacttta tcaacaaaat caatttcttt cagcgt
877

```

<210> 3450

<211> 276

<212> PRT

<213> Homo sapiens

<400> 3450

```

Xaa Ile Phe Ser Asn His His His Arg Leu Gln Leu Lys Ala Ala Pro
1           5           10           15
Ala Ser Ser Asn Pro Pro Gly Ala Pro Ala Leu Pro Leu His Asn Ser
20           25           30
Ser Val Thr Ala Asn Ser Gln Ser Pro Ala Leu Leu Ala Gly Thr Asn
35           40           45
Pro Val Ala Val Val Ala Asp Gly Gly Ser Cys Pro Ala His Tyr Pro
50           55           60
Val His Glu Cys Val Phe Lys Gly Asp Val Arg Arg Leu Ser Ser Leu
65           70           75           80
Ile Arg Thr His Asn Ile Gly Gln Lys Asp Asn His Gly Asn Thr Pro
85           90           95
Leu His Leu Ala Val Met Leu Gly Asn Lys Glu Cys Ala His Leu Leu

```

```

      100      105      110
Leu Ala His Asn Ala Pro Val Lys Val Lys Asn Ala Gln Gly Trp Ser
      115      120      125
Pro Leu Ala Glu Ala Ile Ser Tyr Gly Asp Arg Gln Met Ile Thr Ala
      130      135      140
Leu Leu Arg Lys Leu Lys Gln Gln Ser Arg Glu Ser Val Glu Glu Lys
      145      150      155      160
Arg Pro Arg Leu Leu Lys Ala Leu Lys Glu Leu Gly Asp Phe Tyr Leu
      165      170      175
Glu Leu His Trp Asp Phe Gln Ser Trp Val Pro Leu Leu Ser Arg Ile
      180      185      190
Leu Pro Ser Asp Ala Cys Lys Ile Tyr Lys Gln Gly Ile Asn Ile Arg
      195      200      205
Leu Asp Thr Thr Leu Ile Asp Phe Thr Asp Met Lys Cys Gln Arg Gly
      210      215      220
Asp Leu Ser Phe Ile Phe Asn Gly Asp Ala Ala Pro Ser Glu Ser Phe
      225      230      235      240
Val Val Leu Asp Asn Glu Gln Lys Val Tyr Gln Arg Ile His His Glu
      245      250      255
Ala His Ile Pro Gly Ile Arg Asp Gly Asn Arg Arg Arg Gly Gly Tyr
      260      265      270
Phe Asn Glu Gln
      275

```

<210> 3451

<211> 595

<212> DNA

<213> Homo sapiens

<400> 3451

```

gcattttttac agtttgtata tcccatthtc aaggcttcag tggggctgct tagacaaaaa
60
cgatcttcag ggtttacaga atgggtcctc cttaaagctct ctgagccccc gccgtaggta
120
gaaatattca gtaagtagtg ccctgccatt gcaggtttgg atgtccttct gccagcaaaa
180
cccagcatga acctctggct tgtggagatg tcttcagct ggaaacctga gtgagcgaag
240
ttgaactgtg agggcgccac aactgagaga agattctgcc tccgaaccct ctgaatgaga
300
gtctgaagga tctgatcttg ggttgcttta cttagtcctt cgtggtattg gtgtgtgtca
360
atgctggagt ccctcagctc cttagctgaa aagagctgaa ggggccttgg aacctggggg
420
agctgcttac ttgcaaggt ttgcccagc tgcctgctgc tagctggatg ggactgtctc
480
tcattaaactt cctctctggg gctattttct gttgtgttgg tagctatgag cgctcccatc
540
cccccttctt cttttgcagg caggggaacc gcttccattt caactttggg gagag
595

```

<210> 3452

<211> 192

<212> PRT

<213> Homo sapiens

<400> 3452

```

Met Glu Ala Val Pro Leu Pro Ala Lys Glu Glu Arg Gly Met Gly Ala
 1             5             10             15
Leu Ile Ala Thr Asn Thr Thr Glu Asn Ser Thr Arg Glu Glu Val Asn
      20             25             30
Glu Arg Gln Ser His Pro Ala Thr Gln Gln Gln Leu Gly Lys Thr Leu
      35             40             45
Gln Ser Lys Gln Leu Pro Gln Val Pro Arg Pro Leu Gln Leu Phe Ser
      50             55             60
Ala Lys Glu Leu Arg Asp Ser Ser Ile Asp Thr His Gln Tyr His Glu
      65             70             75             80
Gly Leu Ser Lys Ala Thr Gln Asp Gln Ile Leu Gln Thr Leu Ile Gln
      85             90             95
Arg Val Arg Arg Gln Asn Leu Leu Ser Val Val Pro Pro Ser Gln Phe
      100            105            110
Asn Phe Ala His Ser Gly Phe Gln Leu Glu Asp Ile Ser Thr Ser Gln
      115            120            125
Arg Phe Met Leu Gly Phe Ala Gly Arg Arg Thr Ser Lys Pro Ala Met
      130            135            140
Ala Gly His Tyr Leu Leu Asn Ile Ser Thr Tyr Gly Arg Gly Ser Glu
      145            150            155            160
Ser Phe Arg Arg Thr His Ser Val Asn Pro Glu Asp Arg Phe Cys Leu
      165            170            175
Ser Ser Pro Thr Glu Ala Leu Lys Met Gly Tyr Thr Asn Cys Lys Asn
      180            185            190

```

<210> 3453

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3453

```

nnacgcgtga aggggtcccg ccgcggggct ggcgggctga ggggagaaaa gatggcggcg
60
gcggcggcag ctggtgcggc ctccgggctg ccgggtccag tggcacaagg attaaaggaa
120
gcgttagtgg atacgctcac cgggatccta tccccagtac aggaggtgcg ggcggctgct
180
gaagaacaga ttaaggtgct ggaggtgacg gaggaatttg gtgttcactt ggcagaactg
240
actgtagatc cccagggggc actggcaatc cgtcagctgg catcagtcac cttgaaacaa
300
tatgtggaga ctactgggtg tgcccaatca gagaaattta ggcctcctga aactacagaa
360
agggcaaaaa ttgttatccg ggagctattg cctaattggg tgagagaatc gataagcaaa
420
gtgcgctcca gtgtggccta tgcagtgtca gccattgcc actgggactg gcctgaa
477

```

<210> 3454

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3454

Xaa Arg Val Lys Gly Pro Gly Arg Gly Ala Gly Gly Leu Arg Gly Glu
 1 5 10 15
 Lys Met Ala Ala Ala Ala Ala Ala Gly Ala Ala Ser Gly Leu Pro Gly
 20 25 30
 Pro Val Ala Gln Gly Leu Lys Glu Ala Leu Val Asp Thr Leu Thr Gly
 35 40 45
 Ile Leu Ser Pro Val Gln Glu Val Arg Ala Ala Ala Glu Glu Gln Ile
 50 55 60
 Lys Val Leu Glu Val Thr Glu Glu Phe Gly Val His Leu Ala Glu Leu
 65 70 75 80
 Thr Val Asp Pro Gln Gly Ala Leu Ala Ile Arg Gln Leu Ala Ser Val
 85 90 95
 Ile Leu Lys Gln Tyr Val Glu Thr His Trp Cys Ala Gln Ser Glu Lys
 100 105 110
 Phe Arg Pro Pro Glu Thr Thr Glu Arg Ala Lys Ile Val Ile Arg Glu
 115 120 125
 Leu Leu Pro Asn Gly Leu Arg Glu Ser Ile Ser Lys Val Arg Ser Ser
 130 135 140
 Val Ala Tyr Ala Val Ser Ala Ile Ala His Trp Asp Trp Pro Glu
 145 150 155

<210> 3455

<211> 4886

<212> DNA

<213> Homo sapiens

<400> 3455

nncttcggca caggattgat ccagtcctcc ttccttcact accacatgaa tgctgggcag
 60
 cccaggatca cactcactgc accctcaact cagaccgtta cctggcacac tggcctcact
 120
 cttgtcggag actgagctat tggcagtgcc ttcagctctg agctcaggca cctcgaacat
 180
 tgtttttgtc gttaaggatc ctaaagtgtc gtggggagtg atcacatttt tctcaacatc
 240
 cctggcccca cctcttctgc caaaaacgtc agcatggtgg tatcagccgg ccctttgtcc
 300
 agcgagaagg cagagatgaa cattctagaa atcaatgaga aattgcgccc ccagttggca
 360
 gagaagaaac agcagttcag aaacctcaaa gagaaatgtt ttctaactca actggccggc
 420
 ttcttggcca accgacagaa gaaatacaaaa tatgaagagt gtaaagatct cataaaattt
 480
 atgctgagga atgagcgaca gttcaaggag gagaagcttg cagagcagct caagcaagct
 540
 gaggagctca ggcaatataa agtcctgggt cactcctcagg aacgagagct gacccagtta
 600
 agggagaagt tacgggaagg gagagatgcc tcccgtcat tgaatgagca tctccaggcc
 660
 ctctcactc cggatgagcc ggacaagtcc caggggcagg acctccaaga acagctggct
 720

gaggggtgta ggctggcaca gcacctcgtc caaaagctca gcccagaaaa tgacaacgat
780
gacgatgaag atgttcaagt tgaggtggct gagaaagtgc agaaatcgtc tgccccagg
840
gagatgcaga aggctgaaga aaaggaagtc cctgaggact cactggagga atgtgccatc
900
acttgttcaa atagccatgg cccttatgac tccaaccagc cacataagaa aacaaaaatc
960
acatttgagg aagacaaagt cgactcaact ctcataggct catcctctca tgttgaatgg
1020
gaggatgctg tacacattat tccagaaaat gaaagtgatg atgaggaaga ggaagaaaa
1080
gggccagtgt ctcccaggaa tctgcaggag tctgaagagg aggaagtccc ccaggagtcc
1140
tgggatgaag gttattcgac tctctcaatt cctcctgaaa tggtaggctc gtacaagtct
1200
tacagcagca catttcactc attagaggaa cagcaagtct gcatggctgt tgacataggc
1260
agacatcggg gggatcaagt gaaaaaggag gaccacgagg caacagggtcc caggctcagc
1320
agagagctgc tggatgagaa agggcctgaa gtcttgagg actcactgga tagatgttat
1380
tcaactcctt caggttgctt tgaactgact gactcatgcc agccctacag aagtgccttt
1440
tacgtattgg agcaacagcg tgttggttg gctgttgaca tggatgaaat tgaaaagtac
1500
caagaagtgg aagaagacca agacccatca tgccccaggc tcagcaggga gctgctggat
1560
gagaaagagc ctgaagtctt gcaggactca ctggatagat gttattcgac tccttcagg
1620
tatcttgaac tgctgactt aggccagccc tacagcagtg ctgtttactc attggaggaa
1680
cagtaccttg gcttggtctt tgacgtggac agaattaaaa aggaccaaga agaggaagaa
1740
gaccaaggcc caccatgccc caggctcagc agggagctgc tggaggtagt agagcctgaa
1800
gtcttgagg actcactgga tagatgttat tcaactcctt ccagttgtct tgaacagcct
1860
gactcctgcc agccctatgg aagtccctt tatgcattgg aggaaaagca tgttggtctt
1920
tctcttgacg tgggagaaat tgaaaagaag ggggaaggga agaaaagaag gggaagaaga
1980
tcaaagaagg aaagaagaag ggaagaaaa gaagggaag aagatcaaaa cccaccatgc
2040
cccaggctca gcaggagct gctggatgag aaaggcctg aagtcttgca ggactcactg
2100
gatagatgtt attcaactcc ttcagggtgt cttgaactga ctgactcatg ccagccctac
2160
agaagtgcct ttacatatt ggagcaacag tgtgttggt tggctgttga catggatgaa
2220
attgaaaagt accaagaagt ggaagaagac caagacccat catgccccag gctcagcggg
2280
gagctgttgg atgagaaaga gcctgaagtc ttgcaggagt cactggatag atgctattca
2340

actccttcag gttgtcttga actgactgac tcatgccagc cctacagaag tgccttttac
2400
atattggagc aacagcgtgt tggcttggct gttgacatgg atgaaattga aaagtaccaa
2460
gaagtggaag aagaccaaga cccatcatgc cccaggctca gcaggagct gctggatgag
2520
aaagagcctg aagtcttgca ggactcactg gatagatgtt attcgactcc ttcaggttat
2580
cttgaactgc ctgacttagg ccagccctac agcagtgcctg tttactcatt ggaggaacag
2640
taccttggct tggctcttga cgtggacaga attaaaaagg accaagaaga ggaagaagac
2700
caaggcccac catgccccag gctcagcagg gagctgctgg aggtagtaga gcctgaagtc
2760
ttgcaggact cactggatag atgttattca actccttcca gttgtcttga acagcctgac
2820
tcctgccagc cctatggaag ttctttttat gcattggagg aaaaacatgt tggcttttct
2880
cttgacgtgg gagaaattga aaagaagggg aagggaaga aagaagggg aagaagatca
2940
aagaagcaaa gaagaagggg aagaaaagaa ggggaagaag atcaaaaccc accatgcccc
3000
aggctcaacg gtgtgctgat ggaagtggaa gagcctgaag tcttacagga ctactggat
3060
agatgttatt cgactccgtc aatgtacttt gaactacctg actcattcca gcactacaga
3120
agtgtgtttt actcatttga ggaagagcac atcagcttcg ccctttacgt ggacaatagg
3180
ttttttactt tgacggtgac aagtctccac ctggtgttcc agatgggagt catattccca
3240
caataagcag cccttactaa tccgagagat gtcattcctg caggcaggac ctataggcaa
3300
gtgaagattt gaatgaaagt acagttccat ttggaagccc agacatagga tgggtcagtg
3360
ggcatggctc tattcctatt ctcaaaccat gccagtggca acctgtgctc agtctgaaga
3420
caatggacce aagttaggty tgacacgttc acataactgt gcagcacatg ccgggagtg
3480
tcagtgggac attttaattt gaaccacgta tctctgggta gctacaaaat tcttcaggga
3540
tttcattttg caggcatgtc tctgagcttc tatacctgct caaggtcatt gtcattcttg
3600
tgtttagctc atccaaaggt gttaccctgg tttcaatgaa cctaacctca ttctttgtat
3660
cttcagtgtt gaattgtttt agctgatcca tctgtaacac aggagggatc cttggtgag
3720
gattgtattt cagaaccacc aactgetctt gacaattgtt aaccactag gtccttttg
3780
ttagagaagc cacagtcctt cagcctccaa ttggtgtcag tacttaggaa gaccacagct
3840
agatggacaa acagcattgg gaggccttag ccctgtcct ctcaattcca tctgttagag
3900
aacaggagtc aggagccgct ggcaggagac agcatgtcac ccaggactct gccggtgcag
3960

aatatgaaca atgccatggt cttgcagaaa acgcttagcc tgagtttcat aggaggtaat
 4020
 caccagacaa ctgcagaatg tggaacactg agcaggacaa ctgacctgtc tccttcacat
 4080
 agtccatatc accacaaatc acacaacaaa aaggagaaga gatatttttg gttcaaaaaa
 4140
 agtaaaaaga taatgtagct gcatttcctt agttattttg ggccccaat atttcctcat
 4200
 ctttttgttg ttgtcattga tgggtgtgac atggacttgt ttatagagga caggtcagct
 4260
 gtctggctca atgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag
 4320
 cctaaacgtt ttgccgggaa cactgcagag acaatgctgt gagtttccaa cctcagccca
 4380
 tctgcgggca gagaaggctc agtttgcctc tcaccattat catgatatac ggactgggta
 4440
 cttgggtaag gaggggtcta ggagatctgt cctttttaga gacaccttac ttataatgaa
 4500
 gaagtacttg ggaaagtggg tttcaagagt ataaatatcc tgtattctaa tgatcatcct
 4560
 ctaaacattt tatcatttat taatcctccc tgcctgtgtc tattattata ttcatatctc
 4620
 tacactgcaa aatttggggg ctcaattttt actgtgcctt tgtttttact agtgtctgct
 4680
 gttgcacaaa gaagaaaaca ttctctgctt gagttttaat ttttgcctaa agttaatttt
 4740
 aatctataca attaaaagct ttgcctatc actctggact ttggattgt tttttacatt
 4800
 cagtgttata atattttgtt atgctgattg gttttgggtg gtactgatgt gaattaataa
 4860
 aaacatttca tttccaaaaa aaaaaa
 4886

<210> 3456

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3456

Glu	Ile	Glu	Lys	Lys	Gly	Lys	Gly	Lys	Lys	Arg	Arg	Gly	Arg	Arg	Ser
1			5					10					15		
Lys	Lys	Gln	Arg	Arg	Arg	Gly	Arg	Lys	Glu	Gly	Glu	Glu	Asp	Gln	Asn
		20						25					30		
Pro	Pro	Cys	Pro	Arg	Leu	Asn	Gly	Val	Leu	Met	Glu	Val	Glu	Glu	Pro
		35					40					45			
Glu	Val	Leu	Gln	Asp	Ser	Leu	Asp	Arg	Cys	Tyr	Ser	Thr	Pro	Ser	Met
	50					55				60					
Tyr	Phe	Glu	Leu	Pro	Asp	Ser	Phe	Gln	His	Tyr	Arg	Ser	Val	Phe	Tyr
65					70					75				80	
Ser	Phe	Glu	Glu	Glu	His	Ile	Ser	Phe	Ala	Leu	Tyr	Val	Asp	Asn	Arg
					85				90					95	
Phe	Phe	Thr	Leu	Thr	Val	Thr	Ser	Leu	His	Leu	Val	Phe	Gln	Met	Gly
			100					105					110		
Val	Ile	Phe	Pro	Gln											

115

<210> 3457

<211> 646

<212> DNA

<213> Homo sapiens

<400> 3457

acgcgtgact ttgtatccat gtccagggtgt ccatgcgcct gtgtgtgcag atgtgtcnct
60

gtccctgggt gtgtctgtgc ctgtgtgtgc gttgatatct gtgcctgcct cttcacacat
120

aggtgggaat gcagagtgtg tattctttgt nnatgcacct gtacacaggc tngggcgggc
180

aagtgaggat gcgtatgtnn ggttggtgtgt gtctgtatct gcatttgcac gngtgtattg
240

gagattggag ctgtgtgtct gtgcgtgtgt gtagtgtgta cegtgtgcac atgtatgtgt
300

gtgcctgtgg accagcacct gtgttgccac atttgggtga cggtagatcc atgcactnng
360

gtctgcaggt gtatttgca gtgcgtgtgt ctgtctaaca cactctgtag atgtcgccgc
420

ctgaatgaga gccagagcag agctctcccc agccctcccc aagtactgtt cccctctacc
480

gacgactccc cagttctctc cttccctgat gcaatgcacg cctagtgggc tacgtgtgcc
540

aacctccag gccttctcct gccacagget ctgtctctgt cccgtcgctg tgcctcctgc
600

ccctgctaac ccagccctcc gtgccctgga tgcgcccgga catggc
646

<210> 3458

<211> 61

<212> PRT

<213> Homo sapiens

<400> 3458

Thr Arg Asp Phe Val Ser Met Ser Arg Cys Pro Cys Ala Cys Val Cys
1 5 10 15

Arg Cys Val Xaa Val Pro Gly Cys Val Cys Ala Cys Val Cys Val Asp
20 25 30

Ile Cys Ala Cys Leu Phe Thr His Arg Trp Glu Cys Arg Val Cys Ile
35 40 45

Leu Cys Xaa Cys Thr Cys Thr Gln Ala Xaa Ala Gly Lys
50 55 60

<210> 3459

<211> 592

<212> DNA

<213> Homo sapiens

<400> 3459

acgcgtcctg ggctgggtga ccctagcggt ctagatatag cctcttatct tggcaccag
60

gggcatactg gggccctctt ttctctgagc tggggagcaa ggtgccagga ggtggctggg
 120
 gaccctactt cactgcaggg ggctcagccc agtctgcctc aggcagaaca agggctctggg
 180
 ggtggctgtg gggggctgtg gatgggtccc agtgggcctg ctgccactcc caccacatgg
 240
 gacctgcctt cgggcctgc caggattcca gtctgcctc gtcacccca gcttcaggc
 300
 ccttccctgt gtgcagcctc agtttgctg ctgcagaata agcaccacgc tccctcgtgg
 360
 gcagaggcac cggcagactc accacgcgcc ctgcaggcat gtctgtgct gtgccaggca
 420
 ggccccggcc acgtccctgc ccccgagct ggccttcagc ggggacagtg gtcagcactg
 480
 aagacagtca tacctgcccc gccggcactg cctgtctcag cacggggaca atttgaactt
 540
 aagctttaac ttaattaaaa tgaactaaaa ttaaaaaaaaa aaaaaaaaaa aa
 592

<210> 3460
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 3460
 Met Gly Pro Ser Gly Pro Ala Ala Thr Pro Thr Thr Trp Asp Leu Pro
 1 5 10 15
 Ser Gly Pro Ala Arg Ile Pro Val Leu Pro Cys Ser Pro Gln Leu Pro
 20 25 30
 Gly Pro Ser Leu Cys Ala Ala Ser Val Cys Leu Leu Gln Asn Lys His
 35 40 45
 His Ala Pro Ser Trp Ala Glu Ala Pro Ala Asp Ser Pro Arg Ala Leu
 50 55 60
 Gln Ala Cys Pro Val Leu Cys Gln Ala Gly Pro Gly His Val Pro Ala
 65 70 75 80
 Pro Gly Ala Gly Leu Gln Arg Gly Gln Trp Ser Ala Leu Lys Thr Val
 85 90 95
 Ile Pro Ala Arg Pro Ala Leu Pro Cys Ser Ala Arg Gly Gln Phe Glu
 100 105 110
 Leu Lys Leu
 115

<210> 3461
 <211> 474
 <212> DNA
 <213> Homo sapiens

<400> 3461
 ttgctgttcc aggccttagt gtccgttttt gtggtgcagc tgcagctcca cgtcggctac
 60
 ttctgtctgg gtgcatacct ttgtgccctc ctgggcgaact tcgggggcct tctggctgct
 120
 agctttgcgt ccgtggcaga tgtcagctcc agtcgcagcc gcaccttcg gatggcctg
 180

ctggaagcca gcatcggggt ggctgggatg ctggcaagcc tcctcggggg ccactggctc
 240
 cgggcccagg gttatgccaa ccccttctgg ctggccttgg ccttgetgat agccatgact
 300
 ctctatgcag ctttctgctt tggtagagacc ttaaaggagc caaagtcac ccggctcttc
 360
 acgttccgtc accaccgatc cattgtccag ctctatgtgg ctcccgcccc agagaagtcc
 420
 aggaaacatt tagccctcta ctactggcc atcttcgtgg tgatcactgt gcac
 474

<210> 3462

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3462

Met	Ala	Leu	Leu	Glu	Ala	Ser	Ile	Gly	Val	Ala	Gly	Met	Leu	Ala	Ser
1				5				10				15			
Leu	Leu	Gly	Gly	His	Trp	Leu	Arg	Ala	Gln	Gly	Tyr	Ala	Asn	Pro	Phe
		20						25				30			
Trp	Leu	Ala	Leu	Ala	Leu	Leu	Ile	Ala	Met	Thr	Leu	Tyr	Ala	Ala	Phe
		35					40					45			
Cys	Phe	Gly	Glu	Thr	Leu	Lys	Glu	Pro	Lys	Ser	Thr	Arg	Leu	Phe	Thr
	50					55				60					
Phe	Arg	His	His	Arg	Ser	Ile	Val	Gln	Leu	Tyr	Val	Ala	Pro	Ala	Pro
65					70					75				80	
Glu	Lys	Ser	Arg	Lys	His	Leu	Ala	Leu	Tyr	Ser	Leu	Ala	Ile	Phe	Val
				85				90						95	
Val	Ile	Thr	Val	His											
				100											

<210> 3463

<211> 1734

<212> DNA

<213> Homo sapiens

<400> 3463

nngaggcgcc ggcttcggag tgcgcccgcc gccgcagcag cagcgctcct ggaggacccc
 60
 gccgtccccc ggctcaccgc tgcccttcct gctgctgagc tacccgagcg gcggcggcgg
 120
 cagcagcggc agggcaagca ccaccctaatt tatctcatgg ctaatgaacg catgaacctc
 180
 atgaacatgg ccaagctgag tatcaagggc ttgattgaat cagctctgaa cctggggagg
 240
 actcttgact ctgactatgc acctctocag caattctttg tggtagtgga gcactgtctg
 300
 aaacatggct tgaaaagctaa aaaaactttt ctcgacaaa ataaatcctt ctgggggcct
 360
 ctagaactgg tagaaaagct tgttccagaa gccgcagaga taacagcaag tgtaaagat
 420
 cttccaggac ttaagacacc agtaggtaga ggaagagcct ggcttcgttt ggcattaatg
 480

caaaagaaac tttcagaata tatgaaagct ttgatcaata agaaagaact tctcagtga
 540
 ttctacgaac ccaatgccct catgatggaa gaagaaggag ccataattgc tggctctgtg
 600
 gtgggtctga atgtcattga tgccaatttc tgtatgaaag gagaagactt ggactctcag
 660
 gttggagtta tagatttttc aatgtatctc aaggacggga acagcagtaa aggtactgaa
 720
 ggagacggtc agattactgc aattctggac cagaagaact atgtagaaga actgaacaga
 780
 catttgaatg ctactgtaaa caaccttcag gcaaaagtag atgcattaga aaaatccaac
 840
 actaaactga cagaggagct tgcagttgca aacaacagga tcattacctt acaagaagaa
 900
 atggaacgag ttaaagagga aagtccctac atactggaat ccaatcggaa ggggcccaag
 960
 caagacagaa ctgcagaagg gcaagcacta agtgaagcaa gaaagcattt aaaagaagag
 1020
 acacaattac gattggatgt tgagaaagaa ctggagatgc agatcagcat gaggcaggag
 1080
 atggaattgg ctatgaagat gctggagaag gatgtctgtg agaagcagga tgccctggta
 1140
 tctcttcggc agcagctgga tgacctcaga gctctcaagc atgaacttgc ctttaagctg
 1200
 cagagttcag acttaggagt aaaacagaaa agtgaactaa acagtcgctt ggaagagaag
 1260
 actaatcaga tggctgctac cattaacaa cttgaacaaa ggtaaaagtc ctgtttcttt
 1320
 aatgaaacac tttggattgt cagtgtctgaa gtgaaaagaa tgtgctgtac attcggcaaa
 1380
 tagaaaatac atgaaattct tccaaattag catcagacat tctggtagaa aaaagccagt
 1440
 tgaatgttat gtgtgttttc taaggatga ctgaaatgtt ttaggaaat gtcaatcact
 1500
 tgactagcct ttaaaaaaaa aaaagaaagg tcagcctttt atgactgttt tgaacatcag
 1560
 aactcttaat ccatgtcaga gtcattgtgt agaggaagga tacttaaaag catggaagga
 1620
 ctcttaaatg tatgtatgta attctgtgat tttattgttc atcactgaag tctttgaata
 1680
 cttggatgct aggggatata gaggcactga gagatagggt tcctccaagg atcc
 1734

<210> 3464

<211> 434

<212> PRT

<213> Homo sapiens

<400> 3464

Xaa	Arg	Arg	Arg	Leu	Arg	Ser	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Leu
1				5					10					15	
Leu	Glu	Asp	Pro	Ala	Val	Pro	Arg	Leu	Thr	Ala	Ala	Leu	Pro	Ala	Ala
			20						25				30		
Glu	Leu	Pro	Glu	Arg	Arg	Arg	Arg	Gln	Gln	Arg	Gln	Gly	Lys	His	His

35	40	45
Pro Asn Tyr Leu Met Ala Asn Glu Arg Met Asn Leu Met Asn Met Ala		
50	55	60
Lys Leu Ser Ile Lys Gly Leu Ile Glu Ser Ala Leu Asn Leu Gly Arg		
65	70	75
Thr Leu Asp Ser Asp Tyr Ala Pro Leu Gln Gln Phe Phe Val Val Met		80
85	90	95
Glu His Cys Leu Lys His Gly Leu Lys Ala Lys Lys Thr Phe Leu Gly		
100	105	110
Gln Asn Lys Ser Phe Trp Gly Pro Leu Glu Leu Val Glu Lys Leu Val		
115	120	125
Pro Glu Ala Ala Glu Ile Thr Ala Ser Val Lys Asp Leu Pro Gly Leu		
130	135	140
Lys Thr Pro Val Gly Arg Gly Arg Ala Trp Leu Arg Leu Ala Leu Met		
145	150	155
Gln Lys Lys Leu Ser Glu Tyr Met Lys Ala Leu Ile Asn Lys Lys Glu		
165	170	175
Leu Leu Ser Glu Phe Tyr Glu Pro Asn Ala Leu Met Met Glu Glu Glu		
180	185	190
Gly Ala Ile Ile Ala Gly Leu Leu Val Gly Leu Asn Val Ile Asp Ala		
195	200	205
Asn Phe Cys Met Lys Gly Glu Asp Leu Asp Ser Gln Val Gly Val Ile		
210	215	220
Asp Phe Ser Met Tyr Leu Lys Asp Gly Asn Ser Ser Lys Gly Thr Glu		
225	230	235
Gly Asp Gly Gln Ile Thr Ala Ile Leu Asp Gln Lys Asn Tyr Val Glu		
245	250	255
Glu Leu Asn Arg His Leu Asn Ala Thr Val Asn Asn Leu Gln Ala Lys		
260	265	270
Val Asp Ala Leu Glu Lys Ser Asn Thr Lys Leu Thr Glu Glu Leu Ala		
275	280	285
Val Ala Asn Asn Arg Ile Ile Thr Leu Gln Glu Glu Met Glu Arg Val		
290	295	300
Lys Glu Glu Ser Ser Tyr Ile Leu Glu Ser Asn Arg Lys Gly Pro Lys		
305	310	315
Gln Asp Arg Thr Ala Glu Gly Gln Ala Leu Ser Glu Ala Arg Lys His		
325	330	335
Leu Lys Glu Glu Thr Gln Leu Arg Leu Asp Val Glu Lys Glu Leu Glu		
340	345	350
Met Gln Ile Ser Met Arg Gln Glu Met Glu Leu Ala Met Lys Met Leu		
355	360	365
Glu Lys Asp Val Cys Glu Lys Gln Asp Ala Leu Val Ser Leu Arg Gln		
370	375	380
Gln Leu Asp Asp Leu Arg Ala Leu Lys His Glu Leu Ala Phe Lys Leu		
385	390	395
Gln Ser Ser Asp Leu Gly Val Lys Gln Lys Ser Glu Leu Asn Ser Arg		
405	410	415
Leu Glu Glu Lys Thr Asn Gln Met Ala Ala Thr Ile Lys Gln Leu Glu		
420	425	430
Gln Arg		

<210> 3465

<211> 2904

<212> DNA

<213> Homo sapiens

<400> 3465

acgcgtccgc cggagcgggc catggacgcg ctcaagtcgg cggggcgggc gctgatccgg
60
agccccagct tggccaagca gagctggggg ggcgggtggc ggcaccgcaa gctgcctgag
120
aactggacag acacgcggga gacgctgctg gaggggatgc tgttcagcct caagtacctg
180
ggcatgacgc tagtggagca gccaagggt gagagctgt cggccgccc catcaagagg
240
atcgtggcta cagctaaggc cagtgggaag aagctgcaga aggtgactct gaagggtgtc
300
ccacggggaa ttatcctgac agacaacctc accaaccagc tcattgagaa cgtgtccata
360
tacaggatct cctattgcac agcagacaag atgcacgaca aggtgtttgc atacatcgcc
420
cagagccagc acaaccagag cctcgagtgc cagccttcc tctgcaccaa gcggaagatg
480
gcacaggctg ttaccctcac cgtagcccag gccttcaaag tcgccttga gttttggcag
540
gtgtccaagg aagagaaaga gaagaggac aaagccagcc aagagggagg ggacgtcctg
600
ggggcccggc aagactgcac ccccccttg aagagcttg tcgccactgg gaacctgctg
660
gacttagagg agacggctaa ggccccgctg tccacggtca gcgccaacac caccaacatg
720
gacgaggtgc cgcggccaca agccttgagt ggcagcagtg ttgtctggga gctggatgat
780
ggcctggatg aagcgttttc gaggttgcc cagtctcgga caaacctca ggtcctggac
840
actggcctga cagcccagga catgcattac gccagtgcc tctgcctgt cgactgggac
900
aagcctgaca gcagcggcac agagcaggat gacctcttca gcttctgagg gcccggggccc
960
agccggacac aagcggccct gacacgtgat ggaccaaagc cacctgctgc gggggagcca
1020
gttctggggc ccgcctgcca cctctcccag ccctcagcat tgtcagcctg aagatcagag
1080
ctgcagccag tcaggcaggg gagagatttt tcttttaagc cctgctcttt ctctgagaac
1140
caaaagatgc cttgaatatt tattcagtga cttctggctt atgctcagaa gccagtctgc
1200
gtcaggcacg tctcctgctg cgtgacatgt gcagtgtgt aatcggtcc cgcttgctct
1260
cctggagcaa gctctgccct ggctgtgggt atcaggactg tgaccaaagc atttctagtc
1320
ccttctctct ttctaaggac ccaaatttcc ctgggggcat cctgcttcc gaaagctgtt
1380
ggatttcagt gatttttccc cccaccccc agcacaggag agcaccaca gccgcagaag
1440
gggaatgtgt cctcctgctc tgcttcccca gggcccagca ggcgggggtt tgagccctgg
1500

accccaggct cttagagact aaggggcagc tcctgaccaa agacgataca gcttggcact
1560
ttaaagcatt aacagcaggt gtgaccctga gggctcctcc atggtgctgc attgagtcca
1620
gctttccttc tgcccttcct ccaggagaag gggcccaagg tcccgtgga tggctccac
1680
ctgtgcttgg aaccagtgtg actggctgct ccctgctccc agggactgac acggggatca
1740
tctctgtgac cgcctccgt cggggccctg cctgccttct cccctccacg caaggctgtg
1800
ctcttcctct ggtttctgtg tgtccgtttg agtgtctgct ccccgctcc ccatacttcc
1860
tgggatgatg tgtgaaacct gacacctaga tttatttggg aatattctat gaccacttta
1920
cagatgagga aactgaggcc tcaagcgtgg aggggtagag tgaagagtag aaccaggctc
1980
tgatgccaaa gctgctttct tctctgctc ctcctcacgc aactcacacc tccttttctt
2040
ctagctttgt tgtcctccca ggaacaaaaa aaccacagct attttctgaa caaatgtgt
2100
ttcatacaa accatctggt gcctttccac acagaactgg caggagcctc gtgtcctgct
2160
agctgtctct cttgttgatt tccgtgaaaa tgcaagtgtt tgaagtctgc tcattccgag
2220
ggtgaaacaa aatccaaccc tgtcagaatc atgctgttct ctttctgac actgtgaccc
2280
tggtgcggga cagaccagca gcaatctgtc tttagaatcg ctttccttcc tccccttttg
2340
ccccctggg gctcccggca tcctgaaagc cagcaaagcc tccagcatct tttccatcct
2400
gaggtgcctc ccagtggcct ggcttgtcgg agcaagtctc atcagcccta gggaaaacac
2460
ggccctcctg ggaacctcct tacctggagt aaccggacac cttagacgga ggtgcctgag
2520
ggtggggtgg gatattgcagg gtcattatca gaacatgagg ataacttctc tgcccctgct
2580
ctgtagccac ctccttggca ccggcctcta tttgtcataa ggcggtgtgg gcgaggcctg
2640
acacaggcca gccttggcac gagggggggc aggggttctg agaagcgtg ccctgtgaga
2700
gccatgctgc cctgtgagag ccatgctggc cttcgtctcc atctctggtt gacgggctgt
2760
ccgtgtgct cctgtgtgtc tgcagacaag tcttctgtct ctttatttgt gaaacttta
2820
tgaggaaaaa acaataataa atgtttctcg ttttgaaact caaaaaaaaaa aaaaaaaaaa
2880
aaaaaaaaa aaaaaaaaaa aaaa
2904

<210> 3466

<211> 315

<212> PRT

<213> Homo sapiens

<400> 3466

Thr Arg Pro Pro Glu Arg Ala Met Asp Ala Leu Lys Ser Ala Gly Arg
 1 5 10 15
 Ala Leu Ile Arg Ser Pro Ser Leu Ala Lys Gln Ser Trp Gly Gly Gly
 20 25 30
 Gly Arg His Arg Lys Leu Pro Glu Asn Trp Thr Asp Thr Arg Glu Thr
 35 40 45
 Leu Leu Glu Gly Met Leu Phe Ser Leu Lys Tyr Leu Gly Met Thr Leu
 50 55 60
 Val Glu Gln Pro Lys Gly Glu Glu Leu Ser Ala Ala Ile Lys Arg
 65 70 75 80
 Ile Val Ala Thr Ala Lys Ala Ser Gly Lys Lys Leu Gln Lys Val Thr
 85 90 95
 Leu Lys Val Ser Pro Arg Gly Ile Ile Leu Thr Asp Asn Leu Thr Asn
 100 105 110
 Gln Leu Ile Glu Asn Val Ser Ile Tyr Arg Ile Ser Tyr Cys Thr Ala
 115 120 125
 Asp Lys Met His Asp Lys Val Phe Ala Tyr Ile Ala Gln Ser Gln His
 130 135 140
 Asn Gln Ser Leu Glu Cys His Ala Phe Leu Cys Thr Lys Arg Lys Met
 145 150 155 160
 Ala Gln Ala Val Thr Leu Thr Val Ala Gln Ala Phe Lys Val Ala Phe
 165 170 175
 Glu Phe Trp Gln Val Ser Lys Glu Glu Lys Glu Lys Arg Asp Lys Ala
 180 185 190
 Ser Gln Glu Gly Gly Asp Val Leu Gly Ala Arg Gln Asp Cys Thr Pro
 195 200 205
 Pro Leu Lys Ser Leu Val Ala Thr Gly Asn Leu Leu Asp Leu Glu Glu
 210 215 220
 Thr Ala Lys Ala Pro Leu Ser Thr Val Ser Ala Asn Thr Thr Asn Met
 225 230 235 240
 Asp Glu Val Pro Arg Pro Gln Ala Leu Ser Gly Ser Ser Val Val Trp
 245 250 255
 Glu Leu Asp Asp Gly Leu Asp Glu Ala Phe Ser Arg Leu Ala Gln Ser
 260 265 270
 Arg Thr Asn Pro Gln Val Leu Asp Thr Gly Leu Thr Ala Gln Asp Met
 275 280 285
 His Tyr Ala Gln Cys Leu Ser Pro Val Asp Trp Asp Lys Pro Asp Ser
 290 295 300
 Ser Gly Thr Glu Gln Asp Asp Leu Phe Ser Phe
 305 310 315

<210> 3467

<211> 638

<212> DNA

<213> Homo sapiens

<400> 3467

acgcgtgaag ggcacggagg tattcattgt attattcttt caacctttat gaatgtatca
 60
 acatttgcaa aataaaaaag ttgtggagga ggaagaaaaa caaaaaccag gatgcactga
 120
 ggtctgaggt gaaggtccta ggagcatcag ttctctgttg ggatcaaggt tgctgggaca
 180

gagcttgatc cctgtcaact gctaaaacaa tccaggacaa tccaatagta gagctgaatt
 240
 ttgattacct tggctctgag cttcacagcc ctttggcaga ggaaatcctg tgacactgag
 300
 gtgtaaccac aagactggcc caaactgacc ctattctgtt ggtaacagga ggtatagcag
 360
 agccaaaact gaaagtcatg taaccctggac atgcacaaag gaggaaaatc ataactcgga
 420
 accaacgttt cctccctgtg gagccaagaa gacagggaca tgaccggagc ttgaggggag
 480
 gaacgctttc agaaggggaag ggtccattat cctggaagat ctggtgctga aacctgccat
 540
 tccacacctt accataaatg gccaaagtta aagccctcct attgaaacct gcccgccagc
 600
 acttctgtgt gccaacctgt cctccctaac ccgtcgac
 638

<210> 3468

<211> 88

<212> PRT

<213> Homo sapiens

<400> 3468

Met	Ser	Leu	Ser	Ser	Trp	Leu	His	Arg	Glu	Glu	Thr	Leu	Val	Pro	Ser
1				5					10					15	
Tyr	Asp	Phe	Pro	Pro	Leu	Cys	Met	Ser	Gly	Leu	His	Asp	Phe	Gln	Phe
			20					25					30		
Trp	Leu	Cys	Tyr	Thr	Ser	Cys	Tyr	Gln	Gln	Asn	Arg	Val	Ser	Leu	Gly
		35				40					45				
Gln	Ser	Cys	Gly	Tyr	Thr	Ser	Val	Ser	Gln	Asp	Phe	Leu	Cys	Gln	Arg
	50				55				60						
Ala	Val	Lys	Leu	Arg	Thr	Lys	Val	Ile	Lys	Ile	Gln	Leu	Tyr	Tyr	Trp
65				70				75						80	
Ile	Val	Leu	Asp	Cys	Phe	Ser	Ser								
				85											

<210> 3469

<211> 1710

<212> DNA

<213> Homo sapiens

<400> 3469

gccgcggctc cggggaacgg ccgcgcacgc gcgccccggc tgcttctgct ctttctgggt
 60
 ccgctgctgt gggccccggc tgcgggtccgg gccggcccag atgaagacct tagccaccgg
 120
 aacaaagaac cgccggcgcc ggcccagcag ctgcagccgc agcctgtggc tgtgcagggc
 180
 cccgagccgg cccgggtcga gaaaatattt acaccagcag ctccagttca taccaataaa
 240
 gaagatcctg ctacccaaac taatttgga tttatccatg catttgcgc tgccatatca
 300
 gttattattg tatctgaatt ggggtgataag acatttttta tagcagccat catggcaatg
 360

cgetataacc gcctgaccgt gctggctggt gcaatgcttg ccttgggact aatgacatgc
420
ttgtcagttt tgtttggcta tgccaccaca gtcacccca gggctctatac atactatggt
480
tcaactgtat tatttgecat ttttggcatt agaatgcttc gggaaggctt aaagatgagc
540
cctgatgagg gtcaagagga actggaagaa gttcaagctg aattaaagaa gaaagatgaa
600
gaatttcaac gaaccaaact tttaaatgga cggggagatg ttgaaacggg tacaagcata
660
acagtacctc agaaaaagtg gttgcatttt atttcaccca tttttgttca agctcttaca
720
ttaacattct tagcagaatg gggatgatgc tctcaactaa ctacaattgt attggcagct
780
agagaggacc cctatggtgt agccgtgggt ggaactgtgg ggcactgcct gtgcacggga
840
ttggcagtaa ttggggaag aatgatagca cagaaaaatct ctgtcagaac tgtgacaatc
900
ataggaggca tcgttttttt ggcgtttgca ttttctgcac tatttataag ccctgattct
960
ggtttttaac aagctgtttg ttcacttata tttagttaa aataggtagt attatctttc
1020
tgtacatagt gtacattaca actaaaagta atgggaaaca ctgtattttg tagcattgat
1080
ttgtaagttt gaccactta attattatgc ccaaagata taatcattga ttttatttgt
1140
aaagattttt aaaaaggttt gactcctaag tgtgggtttt tcttctctcc aacataatta
1200
tgttaatatg gtctcattt tctttttggt gcagaaccgt tgtgcagtgg ggtctaccat
1260
gcaattttct ttcagcactg accccttttt aaggaataca aattttctcc ttcactactt
1320
agggtgttta agatgtttac cttaaagtgt tcttgggga aagaatgaat taatttctat
1380
ttcttaaaac atttcctga gccagtaaac agtagtttaa tcattggtct tttcaaaact
1440
agggtgttaa aaaaagagac atatatgata ttgctgttat atcaataaca tggcacaaca
1500
agaactgtct gccaggctat tcttctctt ttttttttaa ttgggttagga caccaatat
1560
aaaaacagtc aatatttgac aatgtggaat taccaaatta aaagagaata ctatgaatgt
1620
attcatattt tttctatatt gaataaaca tgtaacatag ataacaatat aaataaaagt
1680
ggtatgacca gtgaaaaaaaa aaaaaaaaaa
1710

<210> 3470

<211> 322

<212> PRT

<213> Homo sapiens

<400> 3470

Ala Ala Ala Pro Gly Asn Gly Arg Ala Ser Ala Pro Arg Leu Leu Leu

```

      1           5           10           15
Leu Phe Leu Val Pro Leu Leu Trp Ala Pro Ala Ala Val Arg Ala Gly
      20           25           30
Pro Asp Glu Asp Leu Ser His Arg Asn Lys Glu Pro Pro Ala Pro Ala
      35           40           45
Gln Gln Leu Gln Pro Gln Pro Val Ala Val Gln Gly Pro Glu Pro Ala
      50           55           60
Arg Val Glu Lys Ile Phe Thr Pro Ala Ala Pro Val His Thr Asn Lys
      65           70           75           80
Glu Asp Pro Ala Thr Gln Thr Asn Leu Gly Phe Ile His Ala Phe Val
      85           90           95
Ala Ala Ile Ser Val Ile Ile Val Ser Glu Leu Gly Asp Lys Thr Phe
      100          105          110
Phe Ile Ala Ala Ile Met Ala Met Arg Tyr Asn Arg Leu Thr Val Leu
      115          120          125
Ala Gly Ala Met Leu Ala Leu Gly Leu Met Thr Cys Leu Ser Val Leu
      130          135          140
Phe Gly Tyr Ala Thr Thr Val Ile Pro Arg Val Tyr Thr Tyr Tyr Val
      145          150          155          160
Ser Thr Val Leu Phe Ala Ile Phe Gly Ile Arg Met Leu Arg Glu Gly
      165          170          175
Leu Lys Met Ser Pro Asp Glu Gly Gln Glu Glu Leu Glu Glu Val Gln
      180          185          190
Ala Glu Leu Lys Lys Lys Asp Glu Glu Phe Gln Arg Thr Lys Leu Leu
      195          200          205
Asn Gly Pro Gly Asp Val Glu Thr Gly Thr Ser Ile Thr Val Pro Gln
      210          215          220
Lys Lys Trp Leu His Phe Ile Ser Pro Ile Phe Val Gln Ala Leu Thr
      225          230          235          240
Leu Thr Phe Leu Ala Glu Trp Gly Asp Arg Ser Gln Leu Thr Thr Ile
      245          250          255
Val Leu Ala Ala Arg Glu Asp Pro Tyr Gly Val Ala Val Gly Gly Thr
      260          265          270
Val Gly His Cys Leu Cys Thr Gly Leu Ala Val Ile Gly Gly Arg Met
      275          280          285
Ile Ala Gln Lys Ile Ser Val Arg Thr Val Thr Ile Ile Gly Gly Ile
      290          295          300
Val Phe Leu Ala Phe Ala Phe Ser Ala Leu Phe Ile Ser Pro Asp Ser
      305          310          315          320
Gly Phe

```

<210> 3471

<211> 2335

<212> DNA

<213> Homo sapiens

<400> 3471

ggcgcgtgg ccctggccga catcgccctc accggcgggc gcaacatcgt ggtggccacg
60

gcggacggca gcagcgcgtc gcccgtagcag ttctacaagg tgtgcgtgag cgtggtagc
120

gagaagtgcc gtatcgacac ggagatcccg cctccctgt tcatgcgctg caccaccgac
180

ctcaaccgca aggacaagtt ccccgccatc acccacctca agttcctggc ccgggacatg
240
tcggagcagg tgctttttgtg cgcgtccagc cagaccagca gcacgtgga gtgctggtcc
300
ctgcgcaagg agggactccc cgtgaacaac atcttccagc agatctcccc cgtggttgge
360
gacaaacagc ccacaattct caaatggcgg atcctatcgg ccaccaacga tctggaccgt
420
gtgtcggccg tggcgctgcc caagctgccc atctcgtca ccaacaccga cctcaagggtg
480
gccagcgaca cacagttcta ccttggcctc gggctggccc tggccttcca cgacggcagc
540
gtccacatcg tgcaccggct ctactgcag accatggcgg tcttctacag ctcccgggcc
600
ccgaggcctg tggatgagcc ggccatgaag cgcggcgcca ccgcgggccc cgcgtccac
660
ttaaaggcta tgcagctatc gtggacgtca ctggccctgg tggggattga cagccacggg
720
aagctgagcg tgctccgcct ctacacctcc atgggccacc cgtcggaggt ggggctggcg
780
ctgcggcacc tgctcttctt gctggagtac tgcattggtga ccggctacga ctggtgggac
840
atctcgtgc acgtgcagcc cagtatggtc cagagcctgg tggagaagct gcacgaggag
900
tacacgcgcc agaccgctgc cctgcagcag gtcctctcca cccggatcct ggccatgaag
960
gcctcgtctt gcaagctgtc gccctgcacg gtgaccgcgg tgtgcgacta ccacaccaag
1020
ctcttcttca tgcctatcag ctccacctg aagtcgtgc tgcgccccca ctttctcaac
1080
acgctgaca agagccccgg cgaccggctg accgagatct gcaccaagat caccgacgtc
1140
gacattgaca aggtcatgat caacctcaag acggaggaat ttgtgctgga catgaacaca
1200
ctgcaggcgc tgcagcagct cttgcagtgg gtgggcgact tcgtgctgta cctgctggcc
1260
agcctacca accaggggtc cctgctgagg ccgggccaca gctttctgcg ggacggcacc
1320
tcgtgggca tgcttcggga attgatggtg gtcacccga tctggggcct tctgaagccc
1380
agctgcctgc ccgtgtatac ggccacctcg gataccagg acagcatgtc cctgctcttc
1440
cgcctgctca ccaagctctg gatctgctgt cgcgatgagg gccagcgag cgagccggac
1500
gaggcgctgg tggatgaatg ctgcctgctg ccagccagc tgcctatccc cagcctggac
1560
tggctgccag ccagcgacgg cctggttagc cgcctgcagc ccaagcagcc ccttcgtctg
1620
cagtttggcc gggcgccac gctgcctggc agtgcctgca cctgcagct cgacggcctc
1680
gccagggcc caggccagcc caagatcgac cacctcgga ggctgcacct tggcgcttgc
1740
cccacggagg aatgcaaggc ctgcaccagg tgcggctgtg tcaccatgct caagtcgccc
1800

aacagaacca cggcgggtgaa gcagtgggag cagcgctgga tcaagaactg cctgtgcggg
 1860
 gggctcttggg ggcggtgccc cctcagctac ccctgagccc agctgcccct cagctactcc
 1920
 tcagctaccc ctcagctgcc cctgagcccg gctgctgcaa gageccaccg tcgccctgga
 1980
 ctctcctcgg cgcggttaac ctcagcccg cctgcagggc tgttgaaggc cgtgggcccg
 2040
 acgctgcgt gaccagcaga gcttctgagg aagcccctgc ccttgtccag ctgggcccgc
 2100
 agtccacaca ccactctccc aggaccccca gatccctgga ccatctgcat ccagaggacc
 2160
 gtccgtgacg gccggggggtc caggcggacc ttgtggtgac ccggctcggg cgtctcctcg
 2220
 gtttccttgc ctcaccgcg gagagcgtg aacctggaca agcagcggct gggaaggaca
 2280
 ggtccaataa acgcccctcg cgcccaggaa aaaaaaaaaa aaaaaaaaaa aaaaa
 2335

<210> 3472

<211> 631

<212> PRT

<213> Homo sapiens

<400> 3472

Gly	Arg	Val	Ala	Leu	Ala	Asp	Ile	Ala	Phe	Thr	Gly	Gly	Gly	Asn	Ile
1				5				10						15	
Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln	Phe	Tyr
		20					25					30			
Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp	Thr	Glu
		35					40					45			
Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn	Arg	Lys
	50					55					60				
Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg	Asp	Met
65				70						75				80	
Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser	Ile	Val
			85					90					95		
Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn	Ile	Phe
			100					105					110		
Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile	Leu	Lys
		115					120					125			
Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser	Ala	Val
	130					135					140				
Ala	Leu	Pro	Lys	Leu	Pro	Ile	Ser	Leu	Thr	Asn	Thr	Asp	Leu	Lys	Val
145					150					155				160	
Ala	Ser	Asp	Thr	Gln	Phe	Tyr	Pro	Gly	Leu	Gly	Leu	Ala	Leu	Ala	Phe
			165						170					175	
His	Asp	Gly	Ser	Val	His	Ile	Val	His	Arg	Leu	Ser	Leu	Gln	Thr	Met
		180						185					190		
Ala	Val	Phe	Tyr	Ser	Ser	Ala	Ala	Pro	Arg	Pro	Val	Asp	Glu	Pro	Ala
		195					200					205			
Met	Lys	Arg	Pro	Arg	Thr	Ala	Gly	Pro	Ala	Val	His	Leu	Lys	Ala	Met
	210					215					220				
Gln	Leu	Ser	Trp	Thr	Ser	Leu	Ala	Leu	Val	Gly	Ile	Asp	Ser	His	Gly

```

225          230          235          240
Lys Leu Ser Val Leu Arg Leu Ser Pro Ser Met Gly His Pro Leu Glu
          245          250          255
Val Gly Leu Ala Leu Arg His Leu Leu Phe Leu Leu Glu Tyr Cys Met
          260          265          270
Val Thr Gly Tyr Asp Trp Trp Asp Ile Leu Leu His Val Gln Pro Ser
          275          280          285
Met Val Gln Ser Leu Val Glu Lys Leu His Glu Glu Tyr Thr Arg Gln
          290          295          300
Thr Ala Ala Leu Gln Gln Val Leu Ser Thr Arg Ile Leu Ala Met Lys
305          310          315          320
Ala Ser Leu Cys Lys Leu Ser Pro Cys Thr Val Thr Arg Val Cys Asp
          325          330          335
Tyr His Thr Lys Leu Phe Leu Ile Ala Ile Ser Ser Thr Leu Lys Ser
          340          345          350
Leu Leu Arg Pro His Phe Leu Asn Thr Pro Asp Lys Ser Pro Gly Asp
          355          360          365
Arg Leu Thr Glu Ile Cys Thr Lys Ile Thr Asp Val Asp Ile Asp Lys
          370          375          380
Val Met Ile Asn Leu Lys Thr Glu Glu Phe Val Leu Asp Met Asn Thr
385          390          395          400
Leu Gln Ala Leu Gln Gln Leu Leu Gln Trp Val Gly Asp Phe Val Leu
          405          410          415
Tyr Leu Leu Ala Ser Leu Pro Asn Gln Gly Ser Leu Leu Arg Pro Gly
          420          425          430
His Ser Phe Leu Arg Asp Gly Thr Ser Leu Gly Met Leu Arg Glu Leu
          435          440          445
Met Val Val Ile Arg Ile Trp Gly Leu Leu Lys Pro Ser Cys Leu Pro
          450          455          460
Val Tyr Thr Ala Thr Ser Asp Thr Gln Asp Ser Met Ser Leu Leu Phe
465          470          475          480
Arg Leu Leu Thr Lys Leu Trp Ile Cys Cys Arg Asp Glu Gly Pro Ala
          485          490          495
Ser Glu Pro Asp Glu Ala Leu Val Asp Glu Cys Cys Leu Leu Pro Ser
          500          505          510
Gln Leu Leu Ile Pro Ser Leu Asp Trp Leu Pro Ala Ser Asp Gly Leu
          515          520          525
Val Ser Arg Leu Gln Pro Lys Gln Pro Leu Arg Leu Gln Phe Gly Arg
          530          535          540
Ala Pro Thr Leu Pro Gly Ser Ala Ala Thr Leu Gln Leu Asp Gly Leu
545          550          555          560
Ala Arg Ala Pro Gly Gln Pro Lys Ile Asp His Leu Arg Arg Leu His
          565          570          575
Leu Gly Ala Cys Pro Thr Glu Glu Cys Lys Ala Cys Thr Arg Cys Gly
          580          585          590
Cys Val Thr Met Leu Lys Ser Pro Asn Arg Thr Thr Ala Val Lys Gln
          595          600          605
Trp Glu Gln Arg Trp Ile Lys Asn Cys Leu Cys Gly Gly Leu Trp Trp
          610          615          620
Arg Val Pro Leu Ser Tyr Pro
625          630

```

<210> 3473

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 3473

taatgtgccc ccttagaagg acgtgtttct tggtttcaca cgtttgagtc tatgcaccag
60
ctggattttc acaaaggggt ctgaaccttg gctgttggtg agggcaaagt gggcgtggcg
120
gcccacatgcc cgggccggac tgagtgcgcg cgggcgagaa tggcgtacat ccagttggaa
180
ccattaaacg agggttttct ttctagaatc tctggtctgc tgetgtgcag atggacctgc
240
cggcactgct gtcagaagtg ctacgagtcc agctgttgcc agtcaagtga ggatgaagtt
300
gaaattcttg gacctttccc tgctcagacc cctccctggc tgatggccag ccggagcagt
360
gacaaggatg gtgactctgt ccacacggcc agcgaagtc cgctgacccc acggaccaat
420
tccccggatg gaagacgctc gtcctcagac acatccaagt ctacatacag cctgacgcgg
480
aggatttcga gtcttgagtc aagacgtccc agctctccac tcatcgatat taaaccatc
540
gagtttggtg ttctcagcgc caagaaggag cccatccaac cttcgggtgct cagacggacc
600
tataaccccg acgactatct caggaagttc gaacccacc tgtactccct cgactccaac
660
agcgacgatg tggactctct gacagacgag gagatcctgt ccaagtacca gctgggcatg
720
ctgcacttca gcactcagta cgacctgctg cacaaccacc tcaccgtgcg cgtgatcgag
780
gccaggggacc tgccacctcc catctccacc gatggctcgc gccaggacat ggcgcactcc
840
aaccctacg tcaagatctg tctcctgcca gaccagaaga actcaaagca gaccgggggtc
900
aaacgcaaga cccagaagcc cgtgtttgag gagcgctaca ccttcgagat ccccttctg
960
gaggcccaga ggaggacctt gctcctgacc gtggtggatt ttgataagtt ctcccggcac
1020
tgtgtcattg ggaaagtctt tgtgcctttg tgtgaagttg acctgggtcaa gggcgggcac
1080
tgggtggaagg cgctgattcc cagttctcag aatgaagtgg agctggggga gctgcttctg
1140
tcactgaatt atctcccaag tgctggcaga ctgaatgttg atgtcattcg agccaagcaa
1200
cttcttcaga cagatgagag ccaaggttca gaccttttg tgaaaatcca gctgggtgcat
1260
ggactcaaac ttgtgaaaac caagaagacg tccttcttaa ggggcacaaat tgatcctttc
1320
tacaatgaat ccttcagctt caaagttccc caagaagaac tggaaaatgc cagcctagtg
1380
tttacagttt tcggccacaa catgaagagc agcaatgact tcatcgggag gatcgtcatt
1440
ggccagtact cttcaggccc ctctgagacc aaccactgga ggcgcagtgt caacacgcac
1500

cgcacagccg tggagcagtg gcatagcctg aggtcccag ctgagtgtga ccgcgtgtct
 1560
 cctgcctccc tggaggtgac ctgagggctg caggggaaggc agctttcatt tgtttaaaaa
 1620
 aaaaaagacg gaaaaaatg tgtcacatac tattacatcc
 1660

<210> 3474

<211> 474

<212> PRT

<213> Homo sapiens

<400> 3474

Met	Ala	Tyr	Ile	Gln	Leu	Glu	Pro	Leu	Asn	Glu	Gly	Phe	Leu	Ser	Arg
1				5					10					15	
Ile	Ser	Gly	Leu	Leu	Leu	Cys	Arg	Trp	Thr	Cys	Arg	His	Cys	Cys	Gln
			20					25					30		
Lys	Cys	Tyr	Glu	Ser	Ser	Cys	Cys	Gln	Ser	Ser	Glu	Asp	Glu	Val	Glu
		35					40					45			
Ile	Leu	Gly	Pro	Phe	Pro	Ala	Gln	Thr	Pro	Pro	Trp	Leu	Met	Ala	Ser
	50					55					60				
Arg	Ser	Ser	Asp	Lys	Asp	Gly	Asp	Ser	Val	His	Thr	Ala	Ser	Glu	Val
65				70					75					80	
Pro	Leu	Thr	Pro	Arg	Thr	Asn	Ser	Pro	Asp	Gly	Arg	Arg	Ser	Ser	Ser
				85				90						95	
Asp	Thr	Ser	Lys	Ser	Thr	Tyr	Ser	Leu	Thr	Arg	Arg	Ile	Ser	Ser	Leu
			100					105					110		
Glu	Ser	Arg	Arg	Pro	Ser	Ser	Pro	Leu	Ile	Asp	Ile	Lys	Pro	Ile	Glu
		115					120					125			
Phe	Gly	Val	Leu	Ser	Ala	Lys	Lys	Glu	Pro	Ile	Gln	Pro	Ser	Val	Leu
	130					135					140				
Arg	Arg	Thr	Tyr	Asn	Pro	Asp	Asp	Tyr	Phe	Arg	Lys	Phe	Glu	Pro	His
145				150					155					160	
Leu	Tyr	Ser	Leu	Asp	Ser	Asn	Ser	Asp	Asp	Val	Asp	Ser	Leu	Thr	Asp
			165					170						175	
Glu	Glu	Ile	Leu	Ser	Lys	Tyr	Gln	Leu	Gly	Met	Leu	His	Phe	Ser	Thr
		180					185					190			
Gln	Tyr	Asp	Leu	Leu	His	Asn	His	Leu	Thr	Val	Arg	Val	Ile	Glu	Ala
	195						200					205			
Arg	Asp	Leu	Pro	Pro	Pro	Ile	Ser	His	Asp	Gly	Ser	Arg	Gln	Asp	Met
	210					215					220				
Ala	His	Ser	Asn	Pro	Tyr	Val	Lys	Ile	Cys	Leu	Leu	Pro	Asp	Gln	Lys
225				230					235					240	
Asn	Ser	Lys	Gln	Thr	Gly	Val	Lys	Arg	Lys	Thr	Gln	Lys	Pro	Val	Phe
			245					250						255	
Glu	Glu	Arg	Tyr	Thr	Phe	Glu	Ile	Pro	Phe	Leu	Glu	Ala	Gln	Arg	Arg
		260					265						270		
Thr	Leu	Leu	Thr	Val	Val	Asp	Phe	Asp	Lys	Phe	Ser	Arg	His	Cys	
	275					280					285				
Val	Ile	Gly	Lys	Val	Ser	Val	Pro	Leu	Cys	Glu	Val	Asp	Leu	Val	Lys
	290					295					300				
Gly	Gly	His	Trp	Trp	Lys	Ala	Leu	Ile	Pro	Ser	Ser	Gln	Asn	Glu	Val
305				310					315					320	
Glu	Leu	Gly	Glu	Leu	Leu	Leu	Ser	Leu	Asn	Tyr	Leu	Pro	Ser	Ala	Gly

```

          325          330          335
Arg Leu Asn Val Asp Val Ile Arg Ala Lys Gln Leu Leu Gln Thr Asp
          340          345          350
Val Ser Gln Gly Ser Asp Pro Phe Val Lys Ile Gln Leu Val His Gly
          355          360          365
Leu Lys Leu Val Lys Thr Lys Lys Thr Ser Phe Leu Arg Gly Thr Ile
          370          375          380
Asp Pro Phe Tyr Asn Glu Ser Phe Ser Phe Lys Val Pro Gln Glu Glu
385          390          395          400
Leu Glu Asn Ala Ser Leu Val Phe Thr Val Phe Gly His Asn Met Lys
          405          410          415
Ser Ser Asn Asp Phe Ile Gly Arg Ile Val Ile Gly Gln Tyr Ser Ser
          420          425          430
Gly Pro Ser Glu Thr Asn His Trp Arg Arg Met Leu Asn Thr His Arg
          435          440          445
Thr Ala Val Glu Gln Trp His Ser Leu Arg Ser Arg Ala Glu Cys Asp
          450          455          460
Arg Val Ser Pro Ala Ser Leu Glu Val Thr
465          470

```

<210> 3475

<211> 514

<212> DNA

<213> Homo sapiens

<400> 3475

```

acgcgtctgg agggctgggt cttctgcacg cccgcccga agctgctctg gctgggtgctg
60
cagcccttct tctactcact acggccgctc tgcgtccacc ccaaggccgt gacccgcatg
120
gaggtgctca acacgctggg gcagctggcg gccgacctgg ccatctttgc cctttggggg
180
ctcaagcccg tgggtctacct gctggccagc tccttcctgg gcctgggcct gcaccccatc
240
tcggggcact tcgtggccga gcactacatg ttcctcaagg gccacgagac ctactcctac
300
tatgggcttc tcaactggat caccttcaat gtgggctacc acgtggagca ccacgacttc
360
cccagcatcc cgggctacaa cctgccgctg gtgcggaaga tcgcgcccga gtactacgac
420
cacctgccgc agcaccactc ctgggtgaag gtgctctggg attttgtgtt tgaggactcc
480
ctggggccct atgccagggt gaagcgggtg taca
514

```

<210> 3476

<211> 171

<212> PRT

<213> Homo sapiens

<400> 3476

```

Thr Arg Leu Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu
1          5          10          15
Trp Leu Val Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val

```

```

                20                25                30
His Pro Lys Ala Val Thr Arg Met Glu Val Leu Asn Thr Leu Val Gln
      35                40                45
Leu Ala Ala Asp Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro Val
      50                55                60
Val Tyr Leu Leu Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro Ile
      65                70                75                80
Ser Gly His Phe Val Ala Glu His Tyr Met Phe Leu Lys Gly His Glu
      85                90                95
Thr Tyr Ser Tyr Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val Gly
      100                105                110
Tyr His Val Glu His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn Leu
      115                120                125
Pro Leu Val Arg Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro Gln
      130                135                140
His His Ser Trp Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp Ser
      145                150                155                160
Leu Gly Pro Tyr Ala Arg Val Lys Arg Val Tyr
      165                170

```

<210> 3477

<211> 356

<212> DNA

<213> Homo sapiens

<400> 3477

```

gcgcgcctcg gctgcctgcc cggcgggtctc cgggtcctcg tccagaccgg ccaccggagc
60
ttgacctcct gcacgcaccc ttccatggga cttaatgaag agcagaaaga atttcaaaaa
120
gtggcctttg actttgctgc ccgagagatg gctccaaata tggcagagtg ggaccagaag
180
gtaggcggtt ttcttgctgt tagacgttct aacaacagat gtctcaggca gacctttatc
240
tttgtctccc gataatgtaa ttgttaaagt tctcctccac ttaccaactc ttactgcaag
300
tgagaatacc ggtagtggat gatttttctt agaaggcatc ctgatcatct tgtaca
356

```

<210> 3478

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3478

```

Met Ile Arg Met Pro Ser Arg Lys Asn His Pro Leu Pro Val Phe Ser
  1                5                10                15
Leu Ala Val Arg Val Gly Lys Trp Arg Arg His Leu Thr Ile Thr Leu
      20                25                30
Ser Gly Asp Lys Asp Lys Gly Leu Pro Glu Thr Ser Val Val Arg Thr
      35                40                45
Ser Lys His Lys Lys Asn Ala Tyr Leu Leu Val Pro Leu Cys His Ile
      50                55                60
Trp Ser His Leu Ser Gly Ser Lys Val Lys Gly His Phe Leu Lys Phe

```

```

65          70          75          80
Phe Leu Leu Phe Ile Lys Ser His Gly Arg Val Asp Ala Gly Gly Gln
          85          90          95
Ala Pro Val Ala Gly Leu Asp Glu Asp Pro Glu Thr Ala Gly Gln Ala
          100          105          110
Ala Glu Ala Arg
          115

```

<210> 3479

<211> 797

<212> DNA

<213> Homo sapiens

<400> 3479

```

nctttccaac ccagcctgaa ggggaaagcc acctcggagg acaccctcaa tctaaggaga
60
taccctggct ctgacaggat catgctgcag aagtggcaga aaagggacat cagcaatttt
120
gagtatctca tgtacctcaa caccgaggct gggagaacct gcaatgacta catgcagtac
180
ccagtgttcc cctgggtcct cgcagactac acctcagaga cattgaactt ggcaaatccg
240
aagattttcc gggatctttc aaagcccatg ggggctcaga ccaaggaaag gaagctgaaa
300
tttatccaga ggtttaaaga agttgagaaa actgaaggag acatgactgc ccagtgccac
360
tactacacc actactctc ggccatcatc gtggcctcct acctgggtccg gatgccaccc
420
ttcaccagg cttctgcgc tctgcaggtg agctgctgcc actctctgta cacacacaca
480
cacacacaca cacacacata cgctgtatc acaagactaa gacctgtgct tgaacaaaga
540
caggatgcct ctgctaaaaa cttagtcatt agccagtgat tcccagttga cattgggtcc
600
aggattctgg ctcaccagcc aaggcaggct gttcttctc agttacacct gcacatctgc
660
ccaacaaagt cttgcaaaat gattctaaaa aataagaaat gagacatgaa aaaaatgatt
720
taacataaat aagatttagt ggaaaaagaa aaagcaggaa acttggagac tagaaaggca
780
ggcgggtcaag gattaga
797

```

<210> 3480

<211> 192

<212> PRT

<213> Homo sapiens

<400> 3480

```

Xaa Phe Gln Pro Ser Leu Lys Gly Lys Ala Thr Ser Glu Asp Thr Leu
  1          5          10          15
Asn Leu Arg Arg Tyr Pro Gly Ser Asp Arg Ile Met Leu Gln Lys Trp
          20          25          30
Gln Lys Arg Asp Ile Ser Asn Phe Glu Tyr Leu Met Tyr Leu Asn Thr

```

```
<210> 3481
<211> 1794
<212> DNA
<213> Homo sapiens
```

2649

tggcccaggg agcactaatt ccaagaggca ggcacttgg ttcttgaga aggagaagag
 900
 cagactgctg gctgaggcag cacttgagtt gcgggaggag aacacgaggc aggaacggat
 960
 tctggccctg gccaaagcgac tagccatgct gcggggacag gaccccagag gagtgaccct
 1020
 ccaggactat cgcctcccag acagtgatga cgacgaggat gaggagacag ccatocaaag
 1080
 agtcctgcag cagctcactg aagaagcttc cctggatgag gcaagtggct ttaacatccc
 1140
 tgacagcag gcttctcgac cctggacgca accccgcggg gcagagcctg agggccagga
 1200
 tgtggacccc aggcctgagg ctgaggaaga ggagctcccc tggtgctgca tctgcaatga
 1260
 ggatgccacc ctacgctgag ctggctgcga tggggacctc ttctgtgccc gctgcttccg
 1320
 agagggccat gatgcctttg agcttaaaga gcaccagaca tctgectact ctctccacg
 1380
 tgcaggccaa gagcactgaa gacaccctgg tcctcccgga agggcagtc caccaggcagc
 1440
 ggcacccatt tctgggcccc gccacaggac gtccgatggg agagcttgct tggctctact
 1500
 gatgatgat agggcccttc ctgagccttg gtgtccctgg aatgaggaaa gattctccat
 1560
 tcgagagaat gactgggagg gaagaagtcg gggccctcct attagaagcc cagactggaa
 1620
 gtgagaggca tgatggggag agaccagact gaatctacgg gtgagccctg taacctggct
 1680
 ctagggcaca gggccctccc ctggcactta gtgggtctaa taaagtatgt tgattcattg
 1740
 ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1794

<210> 3482

<211> 206

<212> PRT

<213> Homo sapiens

<400> 3482

Met	Pro	Pro	Ser	Gly	His	His	Leu	Ser	Ser	Ala	Asp	Pro	Ala	Val	Leu
1				5				10					15		
Gly	Ala	Thr	Met	Glu	Ser	Arg	Cys	Tyr	Gly	Cys	Ala	Val	Lys	Phe	Thr
			20					25					30		
Leu	Phe	Lys	Lys	Glu	Tyr	Gly	Cys	Lys	Asn	Cys	Gly	Arg	Xaa	Phe	Cys
		35					40					45			
Ser	Gly	Cys	Leu	Ser	Phe	Ser	Ala	Ala	Val	Pro	Arg	Thr	Gly	Asn	Thr
		50				55				60					
Gln	Gln	Lys	Val	Cys	Lys	Gln	Cys	His	Glu	Val	Leu	Thr	Arg	Gly	Ser
65					70				75					80	
Ser	Ala	Asn	Ala	Ser	Lys	Trp	Ser	Pro	Pro	Gln	Asn	Tyr	Lys	Lys	Arg
			85					90						95	
Val	Ala	Ala	Leu	Glu	Ala	Lys	Gln	Lys	Pro	Ser	Thr	Ser	Gln	Ser	Gln
			100					105					110		
Gly	Leu	Thr	Arg	Gln	Asp	Gln	Met	Ile	Ala	Glu	Arg	Leu	Ala	Arg	Leu

```

      115              120              125
Arg  Gln  Glu  Asn  Lys  Pro  Lys  Leu  Val  Pro  Ser  Gln  Ala  Glu  Ile  Glu
      130              135              140
Ala  Arg  Leu  Ala  Ala  Leu  Lys  Asp  Glu  Arg  Gln  Gly  Ser  Ile  Pro  Ser
145              150              155              160
Thr  Gln  Glu  Met  Glu  Ala  Arg  Leu  Ala  Ala  Leu  Gln  Gly  Arg  Val  Leu
      165              170              175
Pro  Ser  Gln  Thr  Pro  Gln  Pro  Gly  Thr  Ser  His  Thr  Gly  His  Gln  Asp
      180              185              190
Pro  Ser  Pro  Ala  Asp  Thr  Gly  Ser  Ala  Asn  Ala  Ala  Gly  Ser
      195              200              205

```

<210> 3483

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3483

```

ncggccgcgg cgcggaacgg cgcctcccgcc cccaccatgg gcaacagcgc gagccgcaac
60
gacttcgagt gggctctacac cgaccagccg cacacgcagc ggcgcaagga gatactggcc
120
aagtaccggg ccatcaaggc cctgatgcgg ccagaccgcg gcctcaagtg ggcggggctg
180
gtgctgggtgc tgggtcagat gctggcctgc tggctgggtgc gcgggctggc ctggcgctgg
240
ctgctgttct gggcctacgc ctttgggtggc tgcgtgaacc actcgctgac gctggccatc
300
cacgacatct cgcacaacgc ggccttcggc acggggccgtg cggcacgcaa ccgctggctg
360
gccgtgttcg ccaacctgcc cgtgggtgtg ccctacgcgg cctccttcaa gaagtaccac
420
gtggaccacc accgctacct gggcggcgac ggactggacg tggacgtgcc cacgcgt
477

```

<210> 3484

<211> 147

<212> PRT

<213> Homo sapiens

<400> 3484

```

Met  Gly  Asn  Ser  Ala  Ser  Arg  Asn  Asp  Phe  Glu  Trp  Val  Tyr  Thr  Asp
1      5      10      15
Gln  Pro  His  Thr  Gln  Arg  Arg  Lys  Glu  Ile  Leu  Ala  Lys  Tyr  Pro  Ala
      20      25      30
Ile  Lys  Ala  Leu  Met  Arg  Pro  Asp  Pro  Arg  Leu  Lys  Trp  Ala  Gly  Leu
      35      40      45
Val  Leu  Val  Leu  Val  Gln  Met  Leu  Ala  Cys  Trp  Leu  Val  Arg  Gly  Leu
      50      55      60
Ala  Trp  Arg  Trp  Leu  Leu  Phe  Trp  Ala  Tyr  Ala  Phe  Gly  Gly  Cys  Val
65      70      75      80
Asn  His  Ser  Leu  Thr  Leu  Ala  Ile  His  Asp  Ile  Ser  His  Asn  Ala  Ala
      85      90      95
Phe  Gly  Thr  Gly  Arg  Ala  Ala  Arg  Asn  Arg  Trp  Leu  Ala  Val  Phe  Ala

```

```

          100          105          110
Asn Leu Pro Val Gly Val Pro Tyr Ala Ala Ser Phe Lys Lys Tyr His
          115          120          125
Val Asp His His Arg Tyr Leu Gly Gly Asp Gly Leu Asp Val Asp Val
          130          135          140
Pro Thr Arg
145

```

<210> 3485

<211> 812

<212> DNA

<213> Homo sapiens

<400> 3485

```

tattttattta tagtcacaaa aactgttcag gaagaaatgt tatgaaaaga acattttttac
60
tgcatgctta aaacatttaa ttttctatta tacagttaaa catttgcttg aattcagtga
120
gtctaaaaaa tcttattggt ctcagggttag cagttagttg agcagagtcc attggtgaag
180
caatctagtt attggcaaat tctaacacat ggtaaggtgt gggggaaaagg atttaaaata
240
acagaaaaat gtaagtacaa acatacataa cagcaaaata aaactcactt taacaaaaat
300
ttatttaaaa tgttaccccc atatttctct aatgaccaac ttgtttcagt tttatctccc
360
cctcatccgg ttattttatg tctttttggg aggaaggagg atgagggttt ttgtttttta
420
acaaaatcac tggcttttta aaaagtgtta ctgcagtcac ttataagatg catgttatgt
480
ggaagtgata cctgagttgt ttgcatgggc aatggaagag gcagcagctc tgaaaggagt
540
atgagtcag aaaaaaatcc ttcaggaacc ttcaagattg aagaaagaac ttcttttaac
600
attaaagacc aagtattatt ggccagagtc tcttctgaga ttgtgagttt ttcattaact
660
ccttgtgtaa aagtcagtaa aatatcaatg atatcattct gaattttctg ttcataccta
720
tccaaacgac ctgagagggg gatagagcac aggagcatat gtaaagtaac aagcgctgaa
780
ggaacacgca tgtccttaaa ctcaaaggat cc
812

```

<210> 3486

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3486

```

Met Arg Val Pro Ser Ala Leu Val Thr Leu His Met Leu Leu Cys Ser
  1             5             10             15
Ile Pro Leu Ser Gly Arg Leu Asp Ser Asp Glu Gln Lys Ile Gln Asn
          20          25          30
Asp Ile Ile Asp Ile Leu Leu Thr Phe Thr Gln Gly Val Asn Glu Lys

```

```

      35              40              45
Leu Thr Ile Ser Glu Glu Thr Leu Ala Asn Asn Thr Trp Ser Leu Met
      50              55              60
Leu Lys Glu Val Leu Ser Ser Ile Leu Lys Val Pro Glu Gly Phe Phe
      65              70              75              80
Ser Gly Leu Ile Leu Leu Ser Glu Leu Leu Pro Leu Pro Leu Pro Met
      85              90              95
Gln Thr Thr Gln Val Ser Leu Pro His Asn Met His Leu Ile Asn Asp
      100              105              110
Cys Ser Asn Thr Phe
      115

```

<210> 3487

<211> 772

<212> DNA

<213> Homo sapiens

<400> 3487

```

nnattgtatc aaaatcctag atttgaataa cttattatct taaataatca gtaactaaaa
60
ccaagcaatc catcacacaa agaggggaaa gggtaatat ctgagttata aattttttac
120
cctgtctgat aaaaatagaa gcctgaaagt ttaaattttt cctggattta aatttaaaga
180
taaatttggt tttcagttaa ataccctcaa tagcaatttt accaaagagg ccttcttctg
240
aaggccacct ctgaaataat tagaggataa atgtcaatgg catgatatta agatattact
300
tggccaggcg tggctgtcac gcgtgtaatc ccagcacttt gggaggccga ggcaggtgga
360
tcacgaggtc aagaaatcga gaccagcctg gctaacacag tgaaaccccg tctcattctg
420
agcttcttga caccttttaa tccagtcact gaaattagca tctgcaccta gaaagaaaaa
480
actgactata acatcactca tctgcacaac ctattaatca gcaaatactt actgaatacc
540
tactacatcc caggcagtgt tctaggcact ggggagtcgg cagcgaacaa aacctgtctt
600
aacagacctt atcaccaact ctactatagt tataaacata ccaatagttt aacatttagt
660
tggttaatcat gaaacatttt gattttttta aaattttaac tacagtcaac cttaatttca
720
cagatacaaa taatctgcat ttcccccaat cccgctgctc ttagagaagc tt
772

```

<210> 3488

<211> 59

<212> PRT

<213> Homo sapiens

<400> 3488

```

Asp Ile Thr Trp Pro Gly Val Val Val Thr Arg Val Ile Pro Ala Leu
1           5           10           15
Trp Glu Ala Glu Ala Gly Gly Ser Arg Gly Gln Glu Ile Glu Thr Ser

```

```

                20                25                30
Leu Ala Asn Thr Val Lys Pro Arg Leu Ile Leu Ser Phe Leu Thr Pro
                35                40                45
Phe Asn Pro Val Thr Glu Ile Ser Ile Cys Thr
                50                55

```

<210> 3489
 <211> 288
 <212> DNA
 <213> Homo sapiens

```

<400> 3489
tagctaacac tccactatgg gagcccatct cctcccaggg ccagggagac cagggagacc
60
agggagacca ggtctggccc ccaactctaa ggctcatctt agaggcgaga ttcaggccca
120
gcccaagggtg ccccatgagg cctggtggtt ggaggcagag ggtatccctt gccc aaattc
180
gtgccacatt cacagtcact gggaaagcta cggggatggg ccgggcgcgg tggtcacac
240
ctgtaatccc agcactttgg agagcccca gacgacggat caccagtc
288

```

<210> 3490
 <211> 90
 <212> PRT
 <213> Homo sapiens

```

<400> 3490
Met Gly Ala His Leu Leu Pro Gly Pro Gly Arg Pro Gly Arg Pro Gly
1          5          10          15
Arg Pro Gly Leu Ala Pro Asn Ser Lys Ala His Leu Arg Gly Glu Ile
20          25          30
Gln Ala Gln Pro Arg Val Pro His Glu Ala Trp Trp Leu Glu Ala Glu
35          40          45
Gly Ile Pro Cys Pro Asn Ser Cys His Ile His Ser His Trp Glu Ser
50          55          60
Tyr Gly Asp Gly Pro Gly Ala Val Ala His Thr Cys Asn Pro Ser Thr
65          70          75          80
Leu Glu Ser Pro Lys Thr Thr Asp His Glu
85          90

```

<210> 3491
 <211> 568
 <212> DNA
 <213> Homo sapiens

```

<400> 3491
gggaaccgac gtcctctgt ggtgaaattc cacccttca cgcggtgcat cgcgtagcc
60
gacaaggaca gcattctgctt ttgggactgg gagaaagggg agaagctgga ttatttccac
120
aatgggaacc ctcggtacac gagggtcact gccatggagt atctgaatgg ccaggactgc
180

```

tcgcttctgc tgacggccac agacgatggt gccatcaggg tctggaagaa ttttgctgat
 240
 ttggaaaaga acccagagat ggtgaccgcg tggcaggggc tctcggacat gctgccaacg
 300
 acgcgaggag ctgggatggt ggtggactgg gagcaggaga ccggcctcct catgagctca
 360
 ggagacgtgc ggatcgctccg gatctgggac acagaccgtg agatgaaggt gcaggacatc
 420
 cctacgggcg cagacagctg tgtgacgagt ctgtcctgtg attcccaccg ctcactcacc
 480
 gtggctggcc tcggtgacgg ctccatccgc gtctacgaca gaaggatggc actcagcgaa
 540
 tgccgcgtca tgacgtaccg ggagcaca
 568

<210> 3492
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 3492
 Gly Asn Arg Arg Pro Ser Val Val Lys Phe His Pro Phe Thr Pro Cys
 1 5 10 15
 Ile Ala Val Ala Asp Lys Asp Ser Ile Cys Phe Trp Asp Trp Glu Lys
 20 25 30
 Gly Glu Lys Leu Asp Tyr Phe His Asn Gly Asn Pro Arg Tyr Thr Arg
 35 40 45
 Val Thr Ala Met Glu Tyr Leu Asn Gly Gln Asp Cys Ser Leu Leu Leu
 50 55 60
 Thr Ala Thr Asp Asp Gly Ala Ile Arg Val Trp Lys Asn Phe Ala Asp
 65 70 75 80
 Leu Glu Lys Asn Pro Glu Met Val Thr Ala Trp Gln Gly Leu Ser Asp
 85 90 95
 Met Leu Pro Thr Thr Arg Gly Ala Gly Met Val Val Asp Trp Glu Gln
 100 105 110
 Glu Thr Gly Leu Leu Met Ser Ser Gly Asp Val Arg Ile Val Arg Ile
 115 120 125
 Trp Asp Thr Asp Arg Glu Met Lys Val Gln Asp Ile Pro Thr Gly Ala
 130 135 140
 Asp Ser Cys Val Thr Ser Leu Ser Cys Asp Ser His Arg Ser Leu Ile
 145 150 155 160
 Val Ala Gly Leu Gly Asp Gly Ser Ile Arg Val Tyr Asp Arg Arg Met
 165 170 175
 Ala Leu Ser Glu Cys Arg Val Met Thr Tyr Arg Glu His
 180 185

<210> 3493
 <211> 2244
 <212> DNA
 <213> Homo sapiens

<400> 3493
 ngggggggat atccatgcag cgatcaggat gaaagaggtg attcaggaca accaagtaat
 60

aaggaactgt ttggagatga cagtgaggac gagggagctt cacatcatag tggtagtgat
120
aatcactctg aaagatcaga caatagatca gaagcttctg agcgttctga ccatgaggac
180
aatgaccctt cagatgtaga tcagcacagt ggatcagaag cccctaata tgaagaagac
240
gaaggtcata gatcggatgg agggagccat cattcagaag cagaaggttc tgaaaaagca
300
cattcagatg atgaaaaatg gggcagagaa gataaaagt accagtcaga tgaatgaaa
360
atacaaaaatt ctgatgatga ggagagggca caaggatctg atgaagataa gctgcagaat
420
tctgacgatg atgagaaaat gcagaacaca gatgatgagg agaggcctca gctttccgat
480
gatgagagac aacagctatc tgaggaggaa aaggctaatt ctgatgatga acggccggt
540
gcttctgata atgatgatga gaaacagaat tctgatgatg aagaacaacc acagctgtct
600
gatgaagaga aaatgcaaaa ttctgatgat gaaagggcac agggcccaga tgaagaacac
660
aggcattcag atgatgaaga ggaacaggat cataaatcag aatccgcaag aggcagtgat
720
agtgaagatg aagttttacg aatgaaacgc aagaatgcga ttgcatctga ttcagaagcg
780
gatagtgaac ctgaggtgcc aaaagataat agtggaacca tggatttatt tggaggtgca
840
gatgatattc cttcagggag tgatggagaa gacaaaccac ctactccagg acagcctgtt
900
gatgaaaatg gattgcctca ggatcaacag gaagaggagc caattcctga gaccagaata
960
gaagtagaaa tacccaaagt aaacactgat ttaggaaacg acttatattt tgttaaactg
1020
cccaactttc tcagtgtaga gccagacct tttgatcctc agtattatga agatgaattt
1080
gaagatgaag aaatgctgga tgaagaaggc agaaccaggc taaaattaaa ggtagaaaat
1140
actataagat ggaggatacg ccgagatgaa gaaggaaatg aaattaaaga aagcaatgct
1200
cggatagtca agtggtcaga tggaagcatg tccctgcatt taggcaatga agtggttgat
1260
gtgtacaaag cccactgca gggcgaccac aatcatcttt ttataagaca aggtactggt
1320
ctacagggac aagcagtctt taaagcgaaa ctcacctca gacctcactc tacggacagt
1380
gccacacata gaaagatgac tctgtcactt gcagataggt gttcaaagac acagaagatt
1440
agaatcttgc caatggctgg tcgtgatcct gaatgccaac gcacagaaat gattaagaaa
1500
gaagaagaac gtttgagggc ttccatacgt agggaaatctc agcagcgccg aatgagagag
1560
aaacagcacc agcggggggt gagcgccagt tacctggaac ctgatcgata cgatgaggag
1620
gaggaaggcg aggatccat cagcttggct gccattaaaa accgatataa agggggcatt
1680

cgagaggaac gagccagaat ctattcatca gacagtgatg agggatcaga agaagataaa
 1740
 gctcaaagat tactcaaagc aaagaaactt accagtgatg aggaaggtga accttccgga
 1800
 aagagaaaag cagaagatga tgataaagca aataaaaagc ataagaagta tgtgatcagc
 1860
 gatgaagagg aagaagatga tgattgaagt atgaaatatg aaaacatttt atatatttta
 1920
 ttgtacagtt ataaatatgt aaacatgagt tattttgatt gaaatgaatc gatttgcttt
 1980
 tgtgtaattt taattgtaat aaaacaattt aaaagcaagt ctctatgttt aagaaatcta
 2040
 cttttccggc caggcgcggt ggctcatgcc tgtaatccca gcacttcggg aggccgaggc
 2100
 aggtggatca caaggtcgtg gtggcggggtg cctgtagtcg cagctactcg ggaggctgag
 2160
 gcgggggaat tggttgaacc caggaggcag aggttgacgt tagccgagat cgcgccactg
 2220
 cactccagcc tggcgacaga gcta
 2244

<210> 3494

<211> 628

<212> PRT

<213> Homo sapiens

<400> 3494

Xaa	Gly	Gly	Tyr	Pro	Cys	Ser	Asp	Gln	Asp	Glu	Arg	Gly	Asp	Ser	Gly
1				5				10					15		
Gln	Pro	Ser	Asn	Lys	Glu	Leu	Phe	Gly	Asp	Asp	Ser	Glu	Asp	Glu	Gly
			20					25					30		
Ala	Ser	His	His	Ser	Gly	Ser	Asp	Asn	His	Ser	Glu	Arg	Ser	Asp	Asn
			35					40					45		
Arg	Ser	Glu	Ala	Ser	Glu	Arg	Ser	Asp	His	Glu	Asp	Asn	Asp	Pro	Ser
			50					55				60			
Asp	Val	Asp	Gln	His	Ser	Gly	Ser	Glu	Ala	Pro	Asn	Asp	Asp	Glu	Asp
						70				75				80	
Glu	Gly	His	Arg	Ser	Asp	Gly	Gly	Ser	His	His	Ser	Glu	Ala	Glu	Gly
					85					90				95	
Ser	Glu	Lys	Ala	His	Ser	Asp	Asp	Glu	Lys	Trp	Gly	Arg	Glu	Asp	Lys
								105					110		
Ser	Asp	Gln	Ser	Asp	Asp	Glu	Lys	Ile	Gln	Asn	Ser	Asp	Asp	Glu	Glu
								120					125		
Arg	Ala	Gln	Gly	Ser	Asp	Glu	Asp	Lys	Leu	Gln	Asn	Ser	Asp	Asp	Asp
								135					140		
Glu	Lys	Met	Gln	Asn	Thr	Asp	Asp	Glu	Glu	Arg	Pro	Gln	Leu	Ser	Asp
								150					155		160
Asp	Glu	Arg	Gln	Gln	Leu	Ser	Glu	Glu	Glu	Lys	Ala	Asn	Ser	Asp	Asp
								165					170		175
Glu	Arg	Pro	Val	Ala	Ser	Asp	Asn	Asp	Glu	Lys	Gln	Asn	Ser	Asp	
								185					190		
Asp	Glu	Glu	Gln	Pro	Gln	Leu	Ser	Asp	Glu	Glu	Lys	Met	Gln	Asn	Ser
								200					205		
Asp	Asp	Glu	Arg	Pro	Gln	Ala	Pro	Asp	Glu	Glu	His	Arg	His	Ser	Asp

210	215	220
Asp Glu Glu Glu Gln Asp His Lys Ser Glu Ser Ala Arg Gly Ser Asp		
225	230	235
Ser Glu Asp Glu Val Leu Arg Met Lys Arg Lys Asn Ala Ile Ala Ser		
	245	250
Asp Ser Glu Ala Asp Ser Asp Thr Glu Val Pro Lys Asp Asn Ser Gly		
	260	265
Thr Met Asp Leu Phe Gly Gly Ala Asp Asp Ile Ser Ser Gly Ser Asp		
	275	280
Gly Glu Asp Lys Pro Pro Thr Pro Gly Gln Pro Val Asp Glu Asn Gly		
	290	295
Leu Pro Gln Asp Gln Gln Glu Glu Glu Pro Ile Pro Glu Thr Arg Ile		
305	310	315
Glu Val Glu Ile Pro Lys Val Asn Thr Asp Leu Gly Asn Asp Leu Tyr		
	325	330
Phe Val Lys Leu Pro Asn Phe Leu Ser Val Glu Pro Arg Pro Phe Asp		
	340	345
Pro Gln Tyr Tyr Glu Asp Glu Phe Glu Asp Glu Glu Met Leu Asp Glu		
	355	360
Glu Gly Arg Thr Arg Leu Lys Leu Lys Val Glu Asn Thr Ile Arg Trp		
	370	375
Arg Ile Arg Arg Asp Glu Glu Gly Asn Glu Ile Lys Glu Ser Asn Ala		
385	390	395
Arg Ile Val Lys Trp Ser Asp Gly Ser Met Ser Leu His Leu Gly Asn		
	405	410
Glu Val Phe Asp Val Tyr Lys Ala Pro Leu Gln Gly Asp His Asn His		
	420	425
Leu Phe Ile Arg Gln Gly Thr Gly Leu Gln Gly Gln Ala Val Phe Lys		
	435	440
Ala Lys Leu Thr Phe Arg Pro His Ser Thr Asp Ser Ala Thr His Arg		
	450	455
Lys Met Thr Leu Ser Leu Ala Asp Arg Cys Ser Lys Thr Gln Lys Ile		
465	470	475
Arg Ile Leu Pro Met Ala Gly Arg Asp Pro Glu Cys Gln Arg Thr Glu		
	485	490
Met Ile Lys Lys Glu Glu Glu Arg Leu Arg Ala Ser Ile Arg Arg Glu		
	500	505
Ser Gln Gln Arg Arg Met Arg Glu Lys Gln His Gln Arg Gly Leu Ser		
	515	520
Ala Ser Tyr Leu Glu Pro Asp Arg Tyr Asp Glu Glu Glu Glu Gly Glu		
	530	535
Glu Ser Ile Ser Leu Ala Ala Ile Lys Asn Arg Tyr Lys Gly Gly Ile		
545	550	555
Arg Glu Glu Arg Ala Arg Ile Tyr Ser Ser Asp Ser Asp Glu Gly Ser		
	565	570
Glu Glu Asp Lys Ala Gln Arg Leu Leu Lys Ala Lys Lys Leu Thr Ser		
	580	585
Asp Glu Glu Gly Glu Pro Ser Gly Lys Arg Lys Ala Glu Asp Asp Asp		
	595	600
Lys Ala Asn Lys Lys His Lys Lys Tyr Val Ile Ser Asp Glu Glu Glu		
	610	615
Glu Asp Asp Asp		620
625		

<210> 3495
 <211> 1085
 <212> DNA
 <213> Homo sapiens

<400> 3495
 cgggggcccag ggtgccggca ggggcgtccg gggcgctctg accggcctcg cccgcccccc
 60
 cgcagacaca agatggtgaa ggagaccag tactatgaca tcctgggcgt gaagcccagc
 120
 gcgtccccgg aggagatcaa gaaggcctat cggaagctgg cgctcaagta ccaccggac
 180
 aagaaccggg atgagggcga gaagttaaa ctcatatccc aggcataatga agtgctttca
 240
 gateccaaaga aaaggatgt ttatgaccaa ggaggagagc aggcaattaa agaaggaggc
 300
 tcaggcagcc ccagcttctc ttcacccatg gacatctttg acatgttctt tgggtgggtg
 360
 ggacggatgg ctagagagag aagaggcaag aatgttgtag accagttatc tgtaactctt
 420
 gaagatctat ataatggagt cacgaagaaa ttggccctcc agaaaaatgt aatttgtag
 480
 aaatgtgaag gtgttggtgg gaagaaggga tcggtggaga agtgcccgct gtgcaagggg
 540
 cgggggatgc agatccacat ccagcagatc gggccgggca tggtagagca gatccagacc
 600
 gtgtgcatcg agtgcaaggg ccagggtgag cgcatacaacc ccaaggaccg ctgagagagc
 660
 tgcagcgggg ccaagggtgat ccgtgagaag aagattatcg aggtacatgt tgaaaaaggt
 720
 atgaaaagatg ggcaaaagat actatttcat ggagaaggag atcaggagcc tgagctggag
 780
 cctggtgatg tcataattgt gcttgatcag aaggatcata gtgtctttca gagacgaggg
 840
 catgacttga tcatgaaaat gaaaattcag ctttctgaag ctctttgtgg cttcaagaag
 900
 acgataaaaa cattggacaa tcgaattctt gttattacat ccaaagcagg tgagggtgata
 960
 aagcacgggg acctgagatg cgtgcgcgat gaaggaatgc ccatctacaa agcaccctg
 1020
 gaaaaaggga ttctgatcat acagttttta gtaatctttc ctganaaaca ctggctttct
 1080
 ctgga
 1085

<210> 3496
 <211> 337
 <212> PRT
 <213> Homo sapiens

<400> 3496
 Met Val Lys Glu Thr Gln Tyr Tyr Asp Ile Leu Gly Val Lys Pro Ser
 1 5 10 15
 Ala Ser Pro Glu Glu Ile Lys Lys Ala Tyr Arg Lys Leu Ala Leu Lys

```

      20      25      30
Tyr His Pro Asp Lys Asn Pro Asp Glu Gly Glu Lys Phe Lys Leu Ile
      35      40      45
Ser Gln Ala Tyr Glu Val Leu Ser Asp Pro Lys Lys Arg Asp Val Tyr
      50      55      60
Asp Gln Gly Gly Glu Gln Ala Ile Lys Glu Gly Gly Ser Gly Ser Pro
      65      70      75      80
Ser Phe Ser Ser Pro Met Asp Ile Phe Asp Met Phe Phe Gly Gly Gly
      85      90      95
Gly Arg Met Ala Arg Glu Arg Arg Gly Lys Asn Val Val His Gln Leu
      100      105      110
Ser Val Thr Leu Glu Asp Leu Tyr Asn Gly Val Thr Lys Lys Leu Ala
      115      120      125
Leu Gln Lys Asn Val Ile Cys Glu Lys Cys Glu Gly Val Gly Gly Lys
      130      135      140
Lys Gly Ser Val Glu Lys Cys Pro Leu Cys Lys Gly Arg Gly Met Gln
      145      150      155      160
Ile His Ile Gln Gln Ile Gly Pro Gly Met Val Gln Gln Ile Gln Thr
      165      170      175
Val Cys Ile Glu Cys Lys Gly Gln Gly Glu Arg Ile Asn Pro Lys Asp
      180      185      190
Arg Cys Glu Ser Cys Ser Gly Ala Lys Val Ile Arg Glu Lys Lys Ile
      195      200      205
Ile Glu Val His Val Glu Lys Gly Met Lys Asp Gly Gln Lys Ile Leu
      210      215      220
Phe His Gly Glu Gly Asp Gln Glu Pro Glu Leu Glu Pro Gly Asp Val
      225      230      235      240
Ile Ile Val Leu Asp Gln Lys Asp His Ser Val Phe Gln Arg Arg Gly
      245      250      255
His Asp Leu Ile Met Lys Met Lys Ile Gln Leu Ser Glu Ala Leu Cys
      260      265      270
Gly Phe Lys Lys Thr Ile Lys Thr Leu Asp Asn Arg Ile Leu Val Ile
      275      280      285
Thr Ser Lys Ala Gly Glu Val Ile Lys His Gly Asp Leu Arg Cys Val
      290      295      300
Arg Asp Glu Gly Met Pro Ile Tyr Lys Ala Pro Leu Glu Lys Gly Ile
      305      310      315      320
Leu Ile Ile Gln Phe Leu Val Ile Phe Pro Xaa Lys His Trp Leu Ser
      325      330      335
Leu

```

<210> 3497

<211> 1638

<212> DNA

<213> Homo sapiens

<400> 3497

nnaagttaaa aataaatttt caaaccttat catatttact ttaccaacaa tcttgattac
60

gtggcaactt tgttgctata attttatgca gcagataaag gtagacgttc ctcccaaaag
120

tttttagtat atccttctaa aaagttttcc tgagaatttt tagtttgccc tctcaagttt
180

ccttatttta ccttttctta aattacctcc ctccctcctt agtgaaatga gccttccttc
240
agcatacgca acttatcctt attgcttttt tcatacccaa ttttttggtt tatctcttcc
300
agccaactgg gtcctgaagt agctgaaatg cgaaaaaggc agcagtccca aaatgaagga
360
acacctgctg tgtctcaagc tcctggaaac cagaggccca acaacacctg ttgcttttgt
420
tggtgctggt gttgcagctg ctccctgcctc actgtgagga atgaagaaag aggggaaaat
480
gcgggaagac ccacacacac tacaaaaatg gagagtatcc aggtcctaga ggaatgccaa
540
aaccctactg cagaggaagt cttgtcctgg tctcaaaatt ttgacaagat gatgaaggcc
600
ccagcaggaa gaaacctttt cagagagtcc ctccgaacag aatacagtga agagaacctc
660
cttttctggc ttgcttggtg agacttaaaag aaggagcaga acaaaaaagt aattgaagaa
720
aaggctagga tgatatatga agattacatt tctatactat caccaaaaga ggtagctctt
780
gattctcgag ttagagaggt gatcaataga aatctgttg atcccaatcc tcacatgtat
840 aacttcagat atatacttta atgcacagag attcctttcc aagggttttg 900
aactctcaaa tttataagtc atttgttgaa agtactgctg gctcttcttc tgaatcttaa
960
tgttcattta aaaacaatca ttttggaggg ctgagatggg aaataaaagt agttaataa
1020
catcagaaac tgagttcctg gagaactaca gtttagcatt cctcaggcta ctgtgaaaac
1080
acaaccgtta tggcttttgt ctccattttt atcaagggtt tccatgggta agtttggaga
1140
aaataccaca caaaacaatg aattgccaaa ttgtttgttt tattcaagac tcattctact
1200
tgcaagcaaa gtgtatttgt agtcctatga acagtctcct cgtgtatctc cagagactgc
1260
atgtgcaaag taaaaatgctt catttgccac atagtgttg taatatTTaa tccagtagca
1320
taacttataat ctgtatttaa ggacttttgt gcaatatggc ctttaagaaat aattgccaaa
1380
aaaatcggcc atgggttgca ttttttaaca taatctaaga cagaaaaaaa gcaattttta
1440
ctatgtaaca atgggtattca acattctata tactgtgttt agtacactaa ttttgaagcc
1500
aatatttctg tacatgaaaa agagctatctt atctctgttt gttggaaaat cctaattggg
1560
attcctctgg ttgttcactg ccaaaaactgt ggcattttca ttacaggaga gtttactatg
1620
ctaaaagcaa aaaacaaa
1638

<210> 3498

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3498

```

Met Arg Lys Arg Gln Gln Ser Gln Asn Glu Gly Thr Pro Ala Val Ser
 1           5           10           15
Gln Ala Pro Gly Asn Gln Arg Pro Asn Asn Thr Cys Cys Phe Cys Trp
      20           25           30
Cys Cys Cys Cys Ser Cys Ser Cys Leu Thr Val Arg Asn Glu Glu Arg
      35           40           45
Gly Glu Asn Ala Gly Arg Pro Thr His Thr Thr Lys Met Glu Ser Ile
      50           55           60
Gln Val Leu Glu Glu Cys Gln Asn Pro Thr Ala Glu Glu Val Leu Ser
      65           70           75           80
Trp Ser Gln Asn Phe Asp Lys Met Met Lys Ala Pro Ala Gly Arg Asn
      85           90           95
Leu Phe Arg Glu Phe Leu Arg Thr Glu Tyr Ser Glu Glu Asn Leu Leu
      100          105          110
Phe Trp Leu Ala Cys Glu Asp Leu Lys Lys Glu Gln Asn Lys Lys Val
      115          120          125
Ile Glu Glu Lys Ala Arg Met Ile Tyr Glu Asp Tyr Ile Ser Ile Leu
      130          135          140
Ser Pro Lys Glu Val Ser Leu Asp Ser Arg Val Arg Glu Val Ile Asn
      145          150          155          160
Arg Asn Leu Leu Asp Pro Asn Pro His Met Tyr Glu Asp Ala Gln Leu
      165          170          175
Gln Ile Tyr Thr Leu Met His Arg Asp Ser Phe Pro Arg Phe Leu Asn
      180          185          190
Ser Gln Ile Tyr Lys Ser Phe Val Glu Ser Thr Ala Gly Ser Ser Ser
      195          200          205
Glu Ser
      210

```

<210> 3499

<211> 732

<212> DNA

<213> Homo sapiens

<400> 3499

```

ntatggagca atccggtngt gtctgagcc ttggctgctc actcctccgg tcttggcgct
60
gtcctgattc gtcctcacag ccctgacctg gcagaagctt cactcctgcc ccagccccc
120
tgccacgggc ggcgtcccag cctggcacag aggtattgtg attcccanaa tggccaagnc
180
aacagactcn aacctcagga tngttctatt ttgcccaga agcaataatt ttttttcct
240
tctggaaagc cttttcaaga tagtgatggt gatgtggggg cacggcggtc gccgggtaca
300
tggagggtacc ggggtcacag cagcgcaagc accgggaagc agggagcccc tggctctgac
360
tgggcctgta tttttcatgt tgtttctcag ccctctcggc atgggtccgga ggcgacggca
420
gtcctcagtc cccctccac tctgtctgtt cccctggac atggggcaca cgactcagga
480
ccaggccaga ggcaaaggca aggagcaggc agtacgccag caagagtcctc tgtccacggg
540

```

agcccatctt cctgccgggc cctccgtccc gccggccgct cctcccgcgc cgcccctaga
 600
 gcatctcccg ccggccaagc ctccctcccg ccanggtccg gggcgatgca cagactcggg
 660
 gaaggaaaca gacgagggga aaaggtcttc cggaggacgg cagtgcagaa gaggaggggtg
 720
 gggggcggtg cg
 732

<210> 3500
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 3500
 Phe Phe Phe Pro Ser Gly Lys Pro Phe Gln Asp Ser Asp Val Asp Val
 1 5 10 15
 Gly Ala Arg Arg Ser Pro Gly Thr Trp Arg Tyr Arg Gly His Ser Ser
 20 25 30
 Ala Ser Thr Gly Lys Gln Gly Ala Pro Gly Pro Asp Trp Ala Cys Ile
 35 40 45
 Phe His Val Val Leu Gln Pro Ser Arg His Gly Pro Glu Ala Thr Ala
 50 55 60
 Ala Pro Gln Ser Pro Pro Thr Pro Ala Val Pro Pro Gly His Gly Ala
 65 70 75 80
 His Asp Ser Gly Pro Gly Gln Arg Gln Arg Gln Gly Ala Gly Ser Thr
 85 90 95
 Pro Ala Arg Val Pro Val His Gly Ser Pro Ser Ser Cys Arg Ala Leu
 100 105 110
 Arg Pro Ala Gly Arg Ser Ser Arg Ala Ala Pro Arg Ala Ser Pro Ala
 115 120 125
 Gly Gln Ala Ser Ser Arg Pro Xaa Ser Gly Ala Met His Arg Leu Gly
 130 135 140
 Glu Gly Asn Arg Ala Gly Glu Lys Val Phe Arg Arg Thr Ala Val Gln
 145 150 155 160
 Lys Arg Arg Val Gly Gly Thr
 165

<210> 3501
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 3501
 nnagtagcaa ccgccggaat ggcgaaagca acaacaatca aagaagcctt agcgagatgg
 60
 gaagagaaaa ctggccagag gccatctgaa gccaaagaga taaaacttta tgcccagatt
 120
 cccctatag agaagatgga tgcaccttg tccatgcttg ctaattgcga gaagctttca
 180
 ctgtctacaa actgcattga aaaaattgcc aacctgaatg gcttaaaaaa cttgaggata
 240
 ttatcttttag gaagaaacaa cataaagaac ttaaatggac tggaggcagt aggggacaca
 300

ttagaagaac tgtggatctc ctacaatttt attgagaagt tgaaagggat ccacataatg
 360
 aagaaattga agattctcta catgtctaataaacctggttaa aagactgggc tgagtttgtg
 420
 aagctggcag aactgccatg cctcgaagac ctggtgtttg taggcaatcc cttggaagag
 480
 aaacattctg ctgagaataa ctggattgaa gaagcaacca agagagtgcc caaactgaaa
 540
 aagctggatg gtactccagt aattaaagg gatgaggaag aagacaacta atgccacgct
 600
 ttccactgtg tgttaactta tttaaatgtc ataagaacaa tagataaatt ttatataatt
 660
 gtctatttta aaaaaaaaaa aaaaaaaaaa a
 691

<210> 3502
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 3502
 Xaa Val Ala Thr Ala Gly Met Ala Lys Ala Thr Thr Ile Lys Glu Ala
 1 5 10 15
 Leu Ala Arg Trp Glu Glu Lys Thr Gly Gln Arg Pro Ser Glu Ala Lys
 20 25 30
 Glu Ile Lys Leu Tyr Ala Gln Ile Pro Pro Ile Glu Lys Met Asp Ala
 35 40 45
 Ser Leu Ser Met Leu Ala Asn Cys Glu Lys Leu Ser Leu Ser Thr Asn
 50 55 60
 Cys Ile Glu Lys Ile Ala Asn Leu Asn Gly Leu Lys Asn Leu Arg Ile
 65 70 75 80
 Leu Ser Leu Gly Arg Asn Asn Ile Lys Asn Leu Asn Gly Leu Glu Ala
 85 90 95
 Val Gly Asp Thr Leu Glu Glu Leu Trp Ile Ser Tyr Asn Phe Ile Glu
 100 105 110
 Lys Leu Lys Gly Ile His Ile Met Lys Lys Leu Lys Ile Leu Tyr Met
 115 120 125
 Ser Asn Asn Leu Val Lys Asp Trp Ala Glu Phe Val Lys Leu Ala Glu
 130 135 140
 Leu Pro Cys Leu Glu Asp Leu Val Phe Val Gly Asn Pro Leu Glu Glu
 145 150 155 160
 Lys His Ser Ala Glu Asn Asn Trp Ile Glu Glu Ala Thr Lys Arg Val
 165 170 175
 Pro Lys Leu Lys Lys Leu Asp Gly Thr Pro Val Ile Lys Gly Asp Glu
 180 185 190
 Glu Glu Asp Asn
 195

<210> 3503
 <211> 857
 <212> DNA
 <213> Homo sapiens

<400> 3503

gcggcgccca ggtggagcgc gtcgggcccc tggatccggg gaaacggcca aggttgcggg
 60
 agtctcttca ctctcgtctc aaagccattt tgtgccgctg ccgctgcctc tacggccata
 120
 aatgccccaga gattagcgga gaagctccga gcccgaaaac gggaacaaga cacaagaag
 180
 gagccggtgt ccacaaacgc tgttcagcgg agagtgcag aaatagtgcg gttcacacgg
 240
 cagctgcagc gagtccaccc caacgtgctt gctaaggcac tgacccgagg aattctccac
 300
 caggacaaga accttggtgt catcaataag ccctacgggc tccctgtgca tggaggccct
 360
 ggggtccagc tctgcatcac tgatgtacta cctatcctgg caaagatgct tcatggccac
 420
 aaggcagagc ccttgcatct gtgccaccgg ctggacaagg aaaccacagg tgtaatggtg
 480
 ttggcttggg acaaggacat ggcacatcaa gtccaagagt tgtttagaac ccgtcaggtg
 540
 gtgaagaagt actgggcat cactgtgcat gtcccatgc cctcagcagg agtcgtggac
 600
 atccccattg tggagaagga ggggcaaggc cagcagcaac accccagaat gacattgtcc
 660
 ccgagctccc gcatggacga tgggaaaatg gtgaaagtgc ggcgcagccg gaatgcgcaa
 720
 gttgctgtaa ctcagtacca ggtgctcagc agcactctct cctccgccct cgtggagctc
 780
 cagcccatca ctggaataaa acatcagctt cgagttcact tgtcttttgg attggattgt
 840
 ccaatccttg gtgatca
 857

<210> 3504

<211> 285

<212> PRT

<213> Homo sapiens

<400> 3504

Ala	Ala	Pro	Arg	Trp	Ser	Ala	Ser	Gly	Pro	Trp	Ile	Arg	Gly	Asn	Gly
1				5					10					15	
Gln	Gly	Cys	Gly	Ser	Leu	Phe	Thr	Leu	Val	Ser	Lys	Pro	Phe	Cys	Ala
			20					25					30		
Ala	Ala	Ala	Ala	Ser	Thr	Ala	Ile	Asn	Ala	Gln	Arg	Leu	Ala	Glu	Lys
			35				40				45				
Leu	Arg	Ala	Gln	Lys	Arg	Glu	Gln	Asp	Thr	Lys	Lys	Glu	Pro	Val	Ser
50					55				60						
Thr	Asn	Ala	Val	Gln	Arg	Arg	Val	Gln	Glu	Ile	Val	Arg	Phe	Thr	Arg
65					70				75				80		
Gln	Leu	Gln	Arg	Val	His	Pro	Asn	Val	Leu	Ala	Lys	Ala	Leu	Thr	Arg
			85				90						95		
Gly	Ile	Leu	His	Gln	Asp	Lys	Asn	Leu	Val	Val	Ile	Asn	Lys	Pro	Tyr
			100				105						110		
Gly	Leu	Pro	Val	His	Gly	Gly	Pro	Gly	Val	Gln	Leu	Cys	Ile	Thr	Asp
			115				120					125			
Val	Leu	Pro	Ile	Leu	Ala	Lys	Met	Leu	His	Gly	His	Lys	Ala	Glu	Pro

130		135		140
Leu His Leu Cys His Arg Leu Asp Lys Glu Thr Thr Gly Val Met Val				
145		150		155
Leu Ala Trp Asp Lys Asp Met Ala His Gln Val Gln Glu Leu Phe Arg				160
	165		170	175
Thr Arg Gln Val Val Lys Lys Tyr Trp Ala Ile Thr Val His Val Pro				
	180		185	190
Met Pro Ser Ala Gly Val Val Asp Ile Pro Ile Val Glu Lys Glu Gly				
	195		200	205
Gln Gly Gln Gln Gln His Pro Arg Met Thr Leu Ser Pro Ser Ser Arg				
	210		215	220
Met Asp Asp Gly Lys Met Val Lys Val Arg Arg Ser Arg Asn Ala Gln				
225		230		235
Val Ala Val Thr Gln Tyr Gln Val Leu Ser Ser Thr Leu Ser Ser Ala				240
	245		250	255
Leu Val Glu Leu Gln Pro Ile Thr Gly Ile Lys His Gln Leu Arg Val				
	260		265	270
His Leu Ser Phe Gly Leu Asp Cys Pro Ile Leu Gly Asp				
	275		280	285

<210> 3505

<211> 1612

<212> DNA

<213> Homo sapiens

<400> 3505

```

gtgcacgagc tgcattctcag cgccctgcag aaggcccagg tggccctcat gacactgacg
60
ctcttcccg tccggctcct ggttgccgct gccatgatgc tgctggcctg gcccctcgca
120
cttgtcgcac ccctgggctc tgcggagaag gaacccgagc agcccccggc cctgtggagg
180
aagggttggtg acttcctgct gaaggccatc atgcgcacca tgtgggttcgc cggcggcttc
240
caccgggttg ccgtaagggt gcggcaggcg ctgccaccg aggcggccat cctcacgctc
300
gcgcctcact cgtctactt cgacgccatc cctgtgacca tgacgatgtc ctccatcgtg
360
atgaagacag agagcagaga catcccgatc tggggaactc tgatccagta tatacggcct
420
gtgttcgtgt cccggtcaga ccaggattct cgcaggaaaa cagtagaaga aatcaagaga
480
cgggcgcagt ccaacggaaa gtggccacag ataattgattt ttccagaagg aacttgata
540
aacaggacct gcctaattac cttcaaacct ggtgcattca tccctggagc gcccgccac
600
cctggggttt tacgatatcc aaataaactg gacaccatca catggacgtg gcaaggacct
660
ggagcgttg aaatcctgtg gctcacgctg tgcagtttc acaaccaagt ggaaatcgag
720
ttcttctctg tgtacagccc ttctgaggag gagaagagga accccgcgct gtatgccagc
780
aacgtgcggc gagtcatggc cgaggccttg ggtgtctccg tgactgacta cacttcgag
840

```

gactgccagc tggccctggc ggaaggacag ctccgtctcc ccgctgacac ttgcctttta
 900
 gaatttgcca ggctcgtgcy gggcctcggg ctaaaaccag aaaagcttga aaaagatctg
 960
 gacagatact cagaaagagc caggatgaag ggaggagaga agataggtat tgcggagttt
 1020
 gccgcctccc tggaagtccc cgtttctgac ttgctggaag acatgttttc actgttcgac
 1080
 gagagcggca gcgcgaggt ggacctgcga gagtgtgtgg ttgccctgtc tgtcgtctgc
 1140
 tggccggccc ggacctgga caccatccag ctggcctttca agatgtacgg agcgcaagag
 1200
 gacggcagcg tcggcgaagg tgacctgtcc tgcacctca agacggccct ggggggtggca
 1260
 gagctcactg tgaccgacct attccgagcc attgaccaag aggagaaggg gaagatcaca
 1320
 ttcgctgact tccacaggtt tgcagaaatg taccctgcct tcgcagagga atacctgtac
 1380
 ccgcatcaga cacatttcga aagctgtgca gagacctcac ctgcgccaat cccaaacggc
 1440
 ttctgtgccc atttcagccc ggaaaactca gacgctgggc ggaagcctgt tcgcaagaag
 1500
 ctggattagg acccaggggt gcggagagac gcggccctc ccgctggac atcaccgcca
 1560
 tgagcctctt tgcgagtgc ctctgggctc cgctcctcac tctgtgtga ca
 1612

<210> 3506

<211> 502

<212> PRT

<213> Homo sapiens

<400> 3506

Val	His	Glu	Leu	His	Leu	Ser	Ala	Leu	Gln	Lys	Ala	Gln	Val	Ala	Leu
1				5					10					15	
Met	Thr	Leu	Thr	Leu	Phe	Pro	Val	Arg	Leu	Leu	Val	Ala	Ala	Ala	Met
				20				25						30	
Met	Leu	Leu	Ala	Trp	Pro	Leu	Ala	Leu	Val	Ala	Ser	Leu	Gly	Ser	Ala
				35				40						45	
Glu	Lys	Glu	Pro	Glu	Gln	Pro	Pro	Ala	Leu	Trp	Arg	Lys	Val	Val	Asp
				50				55						60	
Phe	Leu	Leu	Lys	Ala	Ile	Met	Arg	Thr	Met	Trp	Phe	Ala	Gly	Gly	Phe
					70					75					80
His	Arg	Val	Ala	Val	Lys	Gly	Arg	Gln	Ala	Leu	Pro	Thr	Glu	Ala	Ala
				85					90						95
Ile	Leu	Thr	Leu	Ala	Pro	His	Ser	Ser	Tyr	Phe	Asp	Ala	Ile	Pro	Val
				100					105					110	
Thr	Met	Thr	Met	Ser	Ser	Ile	Val	Met	Lys	Thr	Glu	Ser	Arg	Asp	Ile
				115				120						125	
Pro	Ile	Trp	Gly	Thr	Leu	Ile	Gln	Tyr	Ile	Arg	Pro	Val	Phe	Val	Ser
						135					140				
Arg	Ser	Asp	Gln	Asp	Ser	Arg	Arg	Lys	Thr	Val	Glu	Glu	Ile	Lys	Arg
						150				155					160
Arg	Ala	Gln	Ser	Asn	Gly	Lys	Trp	Pro	Gln	Ile	Met	Ile	Phe	Pro	Glu

										165					170					175				
Gly	Thr	Cys	Thr	Asn	Arg	Thr	Cys	Leu	Ile	Thr	Phe	Lys	Pro	Gly	Ala									
										180					185					190				
Phe	Ile	Pro	Gly	Ala	Pro	Val	His	Pro	Gly	Val	Leu	Arg	Tyr	Pro	Asn									
										195					200					205				
Lys	Leu	Asp	Thr	Ile	Thr	Trp	Thr	Trp	Gln	Gly	Pro	Gly	Ala	Leu	Glu									
										210					215					220				
Ile	Leu	Trp	Leu	Thr	Leu	Cys	Gln	Phe	His	Asn	Gln	Val	Glu	Ile	Glu									
										225					230					235				
Phe	Leu	Pro	Val	Tyr	Ser	Pro	Ser	Glu	Glu	Lys	Arg	Asn	Pro	Ala										
										245					250					255				
Leu	Tyr	Ala	Ser	Asn	Val	Arg	Arg	Val	Met	Ala	Glu	Ala	Leu	Gly	Val									
										260					265					270				
Ser	Val	Thr	Asp	Tyr	Thr	Phe	Glu	Asp	Cys	Gln	Leu	Ala	Leu	Ala	Glu									
										275					280					285				
Gly	Gln	Leu	Arg	Leu	Pro	Ala	Asp	Thr	Cys	Leu	Leu	Glu	Phe	Ala	Arg									
										290					295					300				
Leu	Val	Arg	Gly	Leu	Gly	Leu	Lys	Pro	Glu	Lys	Leu	Glu	Lys	Asp	Leu									
										305					310					315				
Asp	Arg	Tyr	Ser	Glu	Arg	Ala	Arg	Met	Lys	Gly	Gly	Glu	Lys	Ile	Gly									
										325					330					335				
Ile	Ala	Glu	Phe	Ala	Ala	Ser	Leu	Glu	Val	Pro	Val	Ser	Asp	Leu	Leu									
										340					345					350				
Glu	Asp	Met	Phe	Ser	Leu	Phe	Asp	Glu	Ser	Gly	Ser	Gly	Glu	Val	Asp									
										355					360					365				
Leu	Arg	Glu	Cys	Val	Val	Ala	Leu	Ser	Val	Val	Cys	Trp	Pro	Ala	Arg									
										370					375					380				
Thr	Leu	Asp	Thr	Ile	Gln	Leu	Ala	Phe	Lys	Met	Tyr	Gly	Ala	Gln	Glu									
										385					390					395				
Asp	Gly	Ser	Val	Gly	Glu	Gly	Asp	Leu	Ser	Cys	Ile	Leu	Lys	Thr	Ala									
										405					410					415				
Leu	Gly	Val	Ala	Glu	Leu	Thr	Val	Thr	Asp	Leu	Phe	Arg	Ala	Ile	Asp									
										420					425					430				
Gln	Glu	Glu	Lys	Gly	Lys	Ile	Thr	Phe	Ala	Asp	Phe	His	Arg	Phe	Ala									
										435					440					445				
Glu	Met	Tyr	Pro	Ala	Phe	Ala	Glu	Glu	Tyr	Leu	Tyr	Pro	Asp	Gln	Thr									
										450					455					460				
His	Phe	Glu	Ser	Cys	Ala	Glu	Thr	Ser	Pro	Ala	Pro	Ile	Pro	Asn	Gly									
										465					470					475				
Phe	Cys	Ala	Asp	Phe	Ser	Pro	Glu	Asn	Ser	Asp	Ala	Gly	Arg	Lys	Pro									
										485					490					495				
Val	Arg	Lys	Lys	Leu	Asp																			
										500														

<210> 3507

<211> 885

<212> DNA

<213> Homo sapiens

<400> 3507

nacgcgttga cgacgatgaa gatggcccca agtgtggaag tgggtgcctct gtccagaccc
60

ccaggagagg cttccactc actcttgggg gctgtgtcca cacagggact ctgcagcagc

cgagcccgct ccccgccatc cgtgctcaag tcccactcgc tgtagtcatt gttgatgctg
 180
 acctggggcca tggccccgag agccttcttc ctgcaaggtc tgtgggttct gccttacaac
 240
 cacatgcctc agggagctga gcaacaccca cctgtttggg gctgttagct taggactctt
 300
 ctcaacctgc tctttctccc tgatgggctg tgccagaggc gggtgctatg tgaggtggcc
 360
 atcgctgtct acacctttgg cacctgcatt gccttcctaa tcatcattgg cgaccagcag
 420
 gacaagatta tagctgtgat ggcgaaagag cgggaggggg ccagcggccc ttggtacaca
 480
 gaccgcaagt tcaccatcag cctcactgcc ttctcttcca tctgccccct ctccatcccc
 540
 agggagattg gtttccagaa atatgccagc ttcttgagcg tcgtgggtac ctggtacgct
 600
 acagccatcg ttatcatcaa gtacatctgg ccagataaag agatgacccc agggaacatc
 660
 ctgaccaggc cggcttctct gatggctgtg ttcaatgcca tgcccacccat ctgcttcgga
 720
 tttcagtgcc acgtcagcag tgtgcccgtc ttcaacagca tgcagcagcc tgaagtgaag
 780
 acctgggggtg gagtgggtgac agctgccatg gtcatagccc tcgctgtcta catggggaca
 840
 ggcacatctg gcttctctgac ctttggagct gctgtggatc ctgac
 885

<210> 3508

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3508

Leu	Arg	Thr	Leu	Leu	Asn	Leu	Leu	Phe	Leu	Pro	Asp	Gly	Leu	Cys	Gln
1				5					10					15	
Arg	Arg	Leu	Leu	Cys	Glu	Val	Ala	Ile	Ala	Val	Tyr	Thr	Phe	Gly	Thr
		20						25					30		
Cys	Ile	Ala	Phe	Leu	Ile	Ile	Ile	Gly	Asp	Gln	Gln	Asp	Lys	Ile	Ile
		35				40					45				
Ala	Val	Met	Ala	Lys	Glu	Pro	Glu	Gly	Ala	Ser	Gly	Pro	Trp	Tyr	Thr
		50				55					60				
Asp	Arg	Lys	Phe	Thr	Ile	Ser	Leu	Thr	Ala	Phe	Leu	Phe	Ile	Leu	Pro
65					70				75					80	
Leu	Ser	Ile	Pro	Arg	Glu	Ile	Gly	Phe	Gln	Lys	Tyr	Ala	Ser	Phe	Leu
			85					90						95	
Ser	Val	Val	Gly	Thr	Trp	Tyr	Val	Thr	Ala	Ile	Val	Ile	Ile	Lys	Tyr
			100					105					110		
Ile	Trp	Pro	Asp	Lys	Glu	Met	Thr	Pro	Gly	Asn	Ile	Leu	Thr	Arg	Pro
		115				120					125				
Ala	Ser	Trp	Met	Ala	Val	Phe	Asn	Ala	Met	Pro	Thr	Ile	Cys	Phe	Gly
		130				135					140				
Phe	Gln	Cys	His	Val	Ser	Ser	Val	Pro	Val	Phe	Asn	Ser	Met	Gln	Gln
145					150					155				160	
Pro	Glu	Val	Lys	Thr	Trp	Gly	Gly	Val	Val	Thr	Ala	Ala	Met	Val	Ile

165 170 175
 Ala Leu Ala Val Tyr Met Gly Thr Gly Ile Cys Gly Phe Leu Thr Phe
 180 185 190
 Gly Ala Ala Val Asp Pro Asp
 195

<210> 3509
 <211> 331
 <212> DNA
 <213> Homo sapiens

<400> 3509
 ctagtcacc ggaccatggc ccagccaccc gtccacgact acgtgcctgt ctctgggact
 60
 gccctgggtgc atgtcaaggc cgagtacttc cgctccctgg cccactacca cgtagccatg
 120
 gccctctgcg acggctcccc gaccgagggg gagctcccca cgcacgagca ggtcttcctg
 180
 agccccccac ctctttaaag cccccgaggg cctgggttgc ccagaagtt ggaggagcgc
 240
 aggcagcttg gtaaggcgcc catgggtgga gtgcctggg gctcagatgg tcaccaacgg
 300
 tggcagggtg tccccacca ccctcacgcg t
 331

<210> 3510
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 3510
 Leu Val His Arg Thr Met Ala Gln Pro Pro Val His Asp Tyr Val Pro
 1 5 10 15
 Val Ser Trp Thr Ala Leu Val His Val Lys Ala Glu Tyr Phe Arg Ser
 20 25 30
 Leu Ala His Tyr His Val Ala Met Ala Leu Cys Asp Gly Ser Pro Thr
 35 40 45
 Glu Gly Glu Leu Pro Thr His Glu Gln Val Phe Leu Ser Pro Pro Pro
 50 55 60
 Pro Leu Ser Pro Arg Gly Pro Gly Leu Pro Gln Lys Leu Glu Glu Arg
 65 70 75 80
 Arg Gln Leu Gly Lys Ala Pro Met Gly Gly Val Pro Trp Gly Ser Asp
 85 90 95
 Gly His Gln Arg Trp Gln Gly Val Pro His His Pro His Ala
 100 105 110

<210> 3511
 <211> 3319
 <212> DNA
 <213> Homo sapiens

<400> 3511
 nngcgcgcca ggggcgcctc atgtgagagc cgcgggacct gcagccgccc ccgtccccga
 60

agcacgggggt ggtgtgtggg ggaagccgcc cccggcagca ggatgaaacg aggaggaaga
120
gatagtgacc gtaattcatc agaagaagga actgcagaga aatccaagaa actgaggact
180
acaaatgagc attctcagac ttgtgattgg ggtaatctcc ttcaggacat tattctccaa
240
gtatttaaatt atttgectct tcttgaccgg gctcatgctt cacaagtttg ccgcaactgg
300
aaccaggtat ttcacatgcc tgacttgtgg agatgttttg aatttgaact gaatcagcca
360
gctacatctt atttgaaagc taccatcca gagctgatca aacagattat taaaagacat
420
tcaaaccatc tacaatatgt cagcttcaag gtggacagca gcaaggaatc agctgaagca
480
gcttgtgata tactatcgca acttgtgaat tgctctttaa aaacacttgg acttatttca
540
actgctcgac caagctttat ggatttacca aagtctcact ttatctctgc actgacagtt
600
gtgttcgtaa actccaaatc cctgtcttcg cttaagatag atgatactcc agtagatgat
660
ccatctctca aagtactagt ggccaacaat agtgatacac tcaagctgtt gaaaatgagc
720
agctgtcttc atgtctctcc agcaggatc ctttgtgtgg ctgatcagtg tcacggctta
780
agagaactag ccctgaacta ccacttattg agtgatgagt tggtacttgc attgtctct
840
gaaaaacatg ttcgattaga acatttgccg attgatgtag tcagtgaaga tcctggacag
900
acacacttcc atactattca gaagagtagc tgggatgctt tcatcagaca ttcacccaaa
960
gtgaacttag tgatgtatct tttttatat gaagaagaat ttgacccctt ctttcgctat
1020
gaaataacct ccacccatct gtactttggg agatcagtaa gcaaagatgt gcttggccgt
1080
gtgggaatga catgccctag actggttgaa ctagtagtgt gtgcaaatgg attacggcca
1140
cttgatgaag agttaattcg cattgcagaa cgttgcaaaa atttgtcagc tattggacta
1200
ggggaatgtg aagtctcatg tagtgccctt gttgagtttg tgaagatgtg tgggtggcgc
1260
ctatctcaat tatccattat ggaagaagta ctaattcctg accaaaagta tagtttggag
1320
cagattcact gggaagtgtc caagcatctt ggtaggggtg ggtttcccgat catgatgcc
1380
acttggtaaa aactgcatga tgaatagcac ctttaattca agcaaagtga ttataattaa
1440
agttttatct gctgtagttc tgatataatt ctactatctt gtggcacaga aatttgatat
1500
cttcagtcag tatatgtaaa gattgtttat cggaagacct atgaatgagt ttcggtcaga
1560
aaattccact tgtttcctta gtgtaatagc agtcatatct ccgaattttt tttaatgtgg
1620
ttcggatgtg aaataaccag ttatacgtat taaacagttt acagtctaaa ggaacaaaa
1680

cctatatgtt ataatatcca agaagtacta atagggttttc tgaaatgtta tattctctat
1740
gcattaaaaa aaaaatgtaa acttgacatt ttagggctctt cagttacaca tacacctgtt
1800
ataagggtgtt taatatagct caggaaagtg agcattttgt gagaaaaatg aatatatcat
1860
atctaattgga aaagattgga tgaatgttct caaatgttac aaagctgttt aaagaaaaag
1920
gtatatataa gtaatcagaa cacttagaag actgatagat gtcacacagt ggtattatag
1980
aaggataata cagagccaag atcaaattaa aagacaataa atggaacaga agggaggcag
2040
tgtttagctt tgtataaact tttagggttg ctctgtaatc tgctaaacca tatacttct
2100
tttgtgatat gttattatgt atgtggcact tgaggcactg tatgtaaagt aaggaatgct
2160
ttactagtgc tcttgggttt tatctttgtt taaactagct ttaaagtatt aaacaataat
2220
tgaaatgaaa agcttaccta ttttaaaaag ccaaatttaa ataatatag aactttaaaa
2280
tgtttatcag ttgtttccat gaaagaatat tagtttccag taaattttag tgatggctca
2340
ctcacttttc tattttggaa ttacatagtt atgtaagtaa aattttttaa aatcataaag
2400
ggagcaccat tgtacagtct agcataaaca gcaaatttta aagaggacat atttaagttc
2460
ataatcatat ttttcagtaa atattgctca gtgaactgga aaactttaat agaaaaatgt
2520
ctgcagtttt gtgattgtta atttggttaa accgatattt tatattattt aagttaggta
2580
acattttata ttactttcat atgaataaaa gtaatccatg cattgtagag tctataaaat
2640
gttgagtttt ttttagatgat ataaactttg attctgggca ctagtgctag tagatattac
2700
tacctctctg agggaaatca gaaatgattt aaccccgatg gaatacatta attcttaaag
2760
cggctctttt cagtagtgtg acttttagaa agtgtctcag tagttaagga agctaacagt
2820
cttagatcta cttttaaaac ggatggcctt cttaagaata aagcaaaagg tgattttcta
2880
cataattttt gctttccaaa agtgatgata tgctctccta cagcaacata tgagaagaaa
2940
aaaggcttat ctagattcga aaattaacag caattatagt aatatatccc ctcttctaa
3000
atagtaaaaa gctctgattg tacaagaatt acctgtgcta gtcaagttgt tgtttttct
3060
tgaacaactt tggaaaaatg gatttgacag tacataatca gttctactaa ccaaagcttg
3120
tatttggaat tttacttttt gtacaaattg aattatataa tgcttaaaat actttgtcac
3180
tttataagca aaatgcatag tacttaattt gtttatactg taaagtatat gttaaatgct
3240
tttatcactt tgagaataaa aagttactaa tgcaaaaaaa aaaaaaaaaa aaaaaaaaaa
3300

aaaaaaaaaa aaaaaaaaaa
3319

<210> 3512

<211> 462

<212> PRT

<213> Homo sapiens

<400> 3512

```

Xaa Arg Ala Arg Gly Ala Ser Cys Glu Ser Arg Gly Thr Cys Ser Arg
 1           5           10           15
Arg Arg Pro Arg Ser Thr Gly Trp Cys Val Gly Glu Ala Ala Pro Gly
      20           25           30
Ser Arg Met Lys Arg Gly Gly Arg Asp Ser Asp Arg Asn Ser Ser Glu
      35           40           45
Glu Gly Thr Ala Glu Lys Ser Lys Lys Leu Arg Thr Thr Asn Glu His
      50           55           60
Ser Gln Thr Cys Asp Trp Gly Asn Leu Leu Gln Asp Ile Ile Leu Gln
      65           70           75           80
Val Phe Lys Tyr Leu Pro Leu Leu Asp Arg Ala His Ala Ser Gln Val
      85           90           95
Cys Arg Asn Trp Asn Gln Val Phe His Met Pro Asp Leu Trp Arg Cys
      100          105          110
Phe Glu Phe Glu Leu Asn Gln Pro Ala Thr Ser Tyr Leu Lys Ala Thr
      115          120          125
His Pro Glu Leu Ile Lys Gln Ile Ile Lys Arg His Ser Asn His Leu
      130          135          140
Gln Tyr Val Ser Phe Lys Val Asp Ser Ser Lys Glu Ser Ala Glu Ala
      145          150          155          160
Ala Cys Asp Ile Leu Ser Gln Leu Val Asn Cys Ser Leu Lys Thr Leu
      165          170          175
Gly Leu Ile Ser Thr Ala Arg Pro Ser Phe Met Asp Leu Pro Lys Ser
      180          185          190
His Phe Ile Ser Ala Leu Thr Val Val Phe Val Asn Ser Lys Ser Leu
      195          200          205
Ser Ser Leu Lys Ile Asp Asp Thr Pro Val Asp Asp Pro Ser Leu Lys
      210          215          220
Val Leu Val Ala Asn Asn Ser Asp Thr Leu Lys Leu Leu Lys Met Ser
      225          230          235          240
Ser Cys Pro His Val Ser Pro Ala Gly Ile Leu Cys Val Ala Asp Gln
      245          250          255
Cys His Gly Leu Arg Glu Leu Ala Leu Asn Tyr His Leu Leu Ser Asp
      260          265          270
Glu Leu Leu Leu Ala Leu Ser Ser Glu Lys His Val Arg Leu Glu His
      275          280          285
Leu Arg Ile Asp Val Val Ser Glu Asn Pro Gly Gln Thr His Phe His
      290          295          300
Thr Ile Gln Lys Ser Ser Trp Asp Ala Phe Ile Arg His Ser Pro Lys
      305          310          315          320
Val Asn Leu Val Met Tyr Phe Phe Leu Tyr Glu Glu Glu Phe Asp Pro
      325          330          335
Phe Phe Arg Tyr Glu Ile Pro Ala Thr His Leu Tyr Phe Gly Arg Ser
      340          345          350
Val Ser Lys Asp Val Leu Gly Arg Val Gly Met Thr Cys Pro Arg Leu

```

355	360	365
Val Glu Leu Val Val Cys Ala Asn Gly Leu Arg Pro Leu Asp Glu Glu		
370	375	380
Leu Ile Arg Ile Ala Glu Arg Cys Lys Asn Leu Ser Ala Ile Gly Leu		
385	390	395
Gly Glu Cys Glu Val Ser Cys Ser Ala Phe Val Glu Phe Val Lys Met		400
	405	410
Cys Gly Gly Arg Leu Ser Gln Leu Ser Ile Met Glu Glu Val Leu Ile		415
	420	425
Pro Asp Gln Lys Tyr Ser Leu Glu Gln Ile His Trp Glu Val Ser Lys		430
	435	440
His Leu Gly Arg Val Trp Phe Pro Asp Met Met Pro Thr Trp		445
450	455	460

<210> 3513

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 3513

tgaacctagg ggaatgtagt ctcattggga cttccaggat ccaagcctga cataatctcc
 60
 cagctggagc gaggggaaga tccctgggtc ctggacagga agggggctaa gaagagccag
 120
 ggccctgtgga gtgactactc agaatatgaa cccaagggag agagtcaaaa tacagacttg
 180
 agtccgaagc cattaatttc agagcaaaca gtgattctgg ggaaaacacc cttggggagg
 240
 attgatcaag aaaataatga aacaaagcaa agcttctgtt tgagtccgaa ctctgttgac
 300
 caccgtgaag ttcaggtcct aagccaaagc atgccactca ctccgcacca ggcagtgcct
 360
 agtggagaga ggccctacat gtgtgttgag tgtgggaagt gctttggcgg gagttccac
 420
 ctcttccagc atcagcgtat ccacactgga gagaagccct atgtgtgcag tgtatgtggg
 480
 aaggccttca gccagagctc agtccttagt aaacacagga gaattcacac aggtgagaag
 540
 ccctatgagt gtaatgagtg tggaaaagcc tttagagtga gctcagatct tgctcagcat
 600
 cacaagatac atacaggaga gaagcctcac gaatgtcttg agtgtcggaa agccttcact
 660
 caactctcac atctcattca gcaccagcgg atccacacgg gagaaaggcc atatgtgtgt
 720
 ccgttggtgt ggaaagcctt caaccatagc actgttctgc ggagccacca gagggtagac
 780
 actggggaga agcctcacag gtgcaatgag tgtgggaaaa ccttcagtgt gaagaggaca
 840
 ctgctgcagc accagaggat ccacaccggg gagaagccct acacgtgcag cgagtgtggg
 900
 aaggccttca gcgaccgctc agtcctcatt cagcaccaca acgtgcacac cggggagaag
 960
 ccctatgagt gcagtgagtg tgggaagacc ttcagccacc gctccacact gatgaatcac
 1020

gagcggatcc acaccgagga aaagccctat gcatgctacg aatgtgggaa ggccttcgtt
 1080
 cagcactcac acctgatcca gcaccagaga gtccacactg gggagaagcc ctatgtgtgt
 1140
 ggtgaatgtg ggcacgcctt cagtgcacgc cggctctctga tccagcatga gagaatccac
 1200
 acaggtgaaa agcccttcca gtgcacagaa tgtggcaaag ctntcagcct gaaagcaact
 1260
 ctgattgtgc acctgaggac ccacacgggc gagaagccat atgagtgcaa tagctgcggg
 1320
 aaggccttca gccagtactc agtgcctcgc cagcaccagc ggatccacac aggcgagaag
 1380
 ccctatgagt gcggggagtg tgggcgtgcc ttcaaccagc atggccacct aatccagcac
 1440
 cagaaagtgc acagaaagtt gtgacccatg gctgacacaa gaatccattc tcacagaaac
 1500
 tgcattgtga accacaagca gccttcagcc caagagaagt ctctgttaac tctataggaa
 1560
 gcttttcttt ggcgattcag tgtcacaaaa taactccaga aagaagcact tagcgtgctg
 1620
 ttctgtgga aaaacttcag agactacctg ttttatttct ctcaacatct tgaagttatg
 1680
 ttggagagta atcatacaat tgtagagaat tttggtaaaa aacagccata attctttaac
 1740
 attagtttat ttgaactaag ggaatttaag gcataagaac cattatccca ataaaatctt
 1800
 acattccaaa taaagttctt tttctaagaa cattacatgc ctttctaaa tatcaattaa
 1860
 ccatactaat tattgcactt aaaatttgaa agtcggacta ttttcagtat tctcttaaaa
 1920
 gactaaagta ttgtatggat aaagtgatat aaaaagatat tttcatcaag catcatgtaa
 1980
 aatgggttga aatcctaagt gtgtggattt ccatcctaag tgtgtggagt cctgttttgt
 2040
 atgaacaag gaaaaagctt atatattagt gagaaattac ataaatttaa aaaaaaaaaa
 2100
 aaa
 2103

<210> 3514

<211> 484

<212> PRT

<213> Homo sapiens

<400> 3514

Gly Asn Val Val Ser Leu Gly Leu Pro Gly Ser Lys Pro Asp Ile Ile
 1 5 10 15
 Ser Gln Leu Glu Arg Gly Glu Asp Pro Trp Val Leu Asp Arg Lys Gly
 20 25 30
 Ala Lys Lys Ser Gln Gly Leu Trp Ser Asp Tyr Ser Glu Tyr Glu Pro
 35 40 45
 Lys Gly Glu Ser Gln Asn Thr Asp Leu Ser Pro Lys Pro Leu Ile Ser
 50 55 60
 Glu Gln Thr Val Ile Leu Gly Lys Thr Pro Leu Gly Arg Ile Asp Gln

65					70					75				80	
Glu	Asn	Asn	Glu	Thr	Lys	Gln	Ser	Phe	Cys	Leu	Ser	Pro	Asn	Ser	Val
				85					90					95	
Asp	His	Arg	Glu	Val	Gln	Val	Leu	Ser	Gln	Ser	Met	Pro	Leu	Thr	Pro
			100					105					110		
His	Gln	Ala	Val	Pro	Ser	Gly	Glu	Arg	Pro	Tyr	Met	Cys	Val	Glu	Cys
		115					120					125			
Gly	Lys	Cys	Phe	Gly	Arg	Ser	Ser	His	Leu	Leu	Gln	His	Gln	Arg	Ile
	130					135					140				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Ser	Val	Cys	Gly	Lys	Ala	Phe
145				150						155					160
Ser	Gln	Ser	Ser	Val	Leu	Ser	Lys	His	Arg	Arg	Ile	His	Thr	Gly	Glu
				165					170					175	
Lys	Pro	Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Arg	Val	Ser	Ser
			180					185					190		
Asp	Leu	Ala	Gln	His	His	Lys	Ile	His	Thr	Gly	Glu	Lys	Pro	His	Glu
	195					200						205			
Cys	Leu	Glu	Cys	Arg	Lys	Ala	Phe	Thr	Gln	Leu	Ser	His	Leu	Ile	Gln
	210					215					220				
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Arg	Pro	Tyr	Val	Cys	Pro	Leu	Cys
225				230					235					240	
Gly	Lys	Ala	Phe	Asn	His	Ser	Thr	Val	Leu	Arg	Ser	His	Gln	Arg	Val
			245					250						255	
His	Thr	Gly	Glu	Lys	Pro	His	Arg	Cys	Asn	Glu	Cys	Gly	Lys	Thr	Phe
	260						265					270			
Ser	Val	Lys	Arg	Thr	Leu	Leu	Gln	His	Gln	Arg	Ile	His	Thr	Gly	Glu
	275					280					285				
Lys	Pro	Tyr	Thr	Cys	Ser	Glu	Cys	Gly	Lys	Ala	Phe	Ser	Asp	Arg	Ser
	290				295						300				
Val	Leu	Ile	Gln	His	His	Asn	Val	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
305				310					315					320	
Cys	Ser	Glu	Cys	Gly	Lys	Thr	Phe	Ser	His	Arg	Ser	Thr	Leu	Met	Asn
			325					330						335	
His	Glu	Arg	Ile	His	Thr	Glu	Glu	Lys	Pro	Tyr	Ala	Cys	Tyr	Glu	Cys
	340						345					350			
Gly	Lys	Ala	Phe	Val	Gln	His	Ser	His	Leu	Ile	Gln	His	Gln	Arg	Val
	355					360					365				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Gly	Glu	Cys	Gly	His	Ala	Phe
	370				375						380				
Ser	Ala	Arg	Arg	Ser	Leu	Ile	Gln	His	Glu	Arg	Ile	His	Thr	Gly	Glu
385				390					395					400	
Lys	Pro	Phe	Gln	Cys	Thr	Glu	Cys	Gly	Lys	Ala	Xaa	Ser	Leu	Lys	Ala
			405					410						415	
Thr	Leu	Ile	Val	His	Leu	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
	420						425					430			
Cys	Asn	Ser	Cys	Gly	Lys	Ala	Phe	Ser	Gln	Tyr	Ser	Val	Leu	Ile	Gln
	435					440					445				
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Gly	Glu	Cys
	450				455					460					
Gly	Arg	Ala	Phe	Asn	Gln	His	Gly	His	Leu	Ile	Gln	His	Gln	Lys	Val
465				470					475					480	
His	Arg	Lys	Leu												

<210> 3515
<211> 5003
<212> DNA
<213> Homo sapiens

<400> 3515
caacaattgg atattacatc aaccaagctg aataaccagt gtgagttgct aagccaactt
60
aaaggaaatt tagaagaaga aaatcgcat ctactagatc aaattcagac attaatgcta
120
cagaacagaa cacttttggg gcagaatatg gaaagcaagg atctttttca tgttgaacaa
180
agacagtaca ttgataagtt aaatgaatta agacgtcaga aggagaaact agaagagaaa
240
attatggatc aatacaaatt ttatgaccca tctcctccta gaaggagagg caactggatt
300
actctaaaaa tgagaaaatt gataaagtct aagaaagata ttaatcgggg acgccagaaa
360
tctctaacat taacacccac ccgctcagac tccagtgaag gattttctca gctccctcat
420
caagacagtc aagatagttc ttcagtaggt tcaaactctt tagaagatgg ccagaccttg
480
gggaccaaga aaagcagcac catgaatgac ctggtgcagt ccatggctct agcaggacag
540
tggacaggta gtactgagaa tttggagggt cctgatgata tttcaacggg taaaaggaga
600
aaagaattgg gagctatggc cttctetact acagccatca acttttcaac tgtcaactct
660
tctgcaggct tcagatccaa gcagttgggt aataataaag atactacatc ctttgaagac
720
ataagtcac aaggtgtagg tgatgattct agtacgggat caagagttca tgcttcaaga
780
ccagccagcc ttgatagtagg cagaacatcc actagcaata gcaataataa tgcttcaacta
840
catgaagtca aagcagggtc agttaataac caaagcaggc cacaagcca cagcagtggg
900
gaatttagcc tgcttcatga ccatgagggt tgggtccagca gtggtagcag tccaatccag
960
tacttgaaaa gacagaccag atcaagccca gtgctccagc acaaaatata tgaaacactg
1020
gagagtcgac atcacaagat caaaactggg tcccctggaa gtgaagttgt tactctacaa
1080
cagtttttgg aagaaagcaa taagcttacc tcagtacaga taaagtcctc aagtcaagag
1140
aatcttttag atgaagtaat gaaaagtttg tctgtctctt ctgacttttt gggaaaagac
1200
aaaccagtta gctgtggtct ggccagggtc gtaagtggaa aaacccagg ggacttctat
1260
gatagacgga caactaagcc tgagtttttg agacctggc ctcgaaaaac tgaagatacc
1320
tacttcatta gttctgctgg aaaacctaca ccaggcactc aaggaaaaat aaaattagta
1380
aaagaatctt ctctgtcacg acaatcaaaa gatagtaacc cttatgcaac ttacctcgt
1440

gcaagcagcg tgatctcaac tgccgaagga actacacgaa ggacaagcat ccatgatttt
1500
ttgaccaagg acagtagact gcctatatca gttgattcac caccagctgc tgctgacage
1560
aacaccactg cagcatctaa tgtggacaaa gtacaagaaa gcagaaattc aaaaagcagg
1620
tctagggagc aacaaagctc ctaattctat taccactac atgacatgtg ggccaagtga
1680
gagaaaagtg tccttcagtt tctcagtatg aagcctttat ttctgaagta acaagacacc
1740
tagcaactat aggaatcatt tttaaaaatc ttttaaggaga cttttaacag tccttcgtga
1800
atagagcagg caagaaatac aaaccttcac tccttgaatc aaggagcact actggattca
1860
actgccaaaa ttttttaag gttttaggac ttactatacc ttgtactgtt aagatctact
1920
gaataaagga cgttctctca ctaaggacca ggtgttttaa ggttaagtgt ttaaagaagt
1980
actccaagaa caatctgctt ttttcatcat ttgttttatg aatttatcca tgtttgctta
2040
atgcttctgc taagtgttag ccaaaatcta gccatttata tttagttgtg taaacctaaa
2100
ttaaatgctg tagtattttg tggaaatgtac tatatagcaa gatacagaga aaattgtttt
2160
ggcatgtcag agccttattt ggttagcaga ctgcatgtgt tgatactttt tttttcttaa
2220
agccaattat tttgatgcaa aagaaattca gtttataaga taaatctgaa aaatccataa
2280
tgaaatagga gttataaaaa atttatagtg atattaatct ttccatattt cccattaagc
2340
aacactaagc attcataagt taacctatgg taaagagtgt ttttctgaaa ctttttttta
2400
gtaagatggg ttttcagcaa atggcattcc caagataaag ctgttggtgt ttaactcatt
2460
tcttttcttt ggtattgggt tatgtatgcg tgtgcatttt ttaacttga gagctgactg
2520
ttgcttaaga agttttctta tggcaaaaat aatgtaata agttactatg atctgcattt
2580
tgccagaaac tcatttataa ttaaggctat catttattaa tgattttttt ctcttttatg
2640
atattacatt aaagttgata actgttattg gtacttttga aatatttgta tgtatttgtt
2700
acctttaaac atttggaaga agcacaaaaa aatagattta gttaaccag ggaaacatca
2760
atttttttag tagttccaat tttatatcac agttttattt tcttatgaaa tcaaaaaatg
2820
cattgatact cattaatgca aattcattat ttaacatcaa tatcagagta atcttcaagg
2880
ctggaatga gaaacatact gactttttta aattttaaca gtgtacttct taggctttca
2940
ttaccagctc tgaagaactt tttggaataa ttccatattc catagtgtgt ggtttatgag
3000
ttgtgggttt catcactaac ccagtaacca taagaaaagt ctctctctct ctctctctct
3060

ctttctctct cectctttct ctctctcttt cgtaggccag tagcaatgtt gtgttcacag
3120
tctaatttcc aaaagaccat caataaaaaa gagagcatgt ttaaattgaa atggaactta
3180
gagaacttga gcttacttac gtacttcaat gccaccggtg acttaggttt taccacaaa
3240
tgctgttaac attaaatcat tttgaaaatc ttggatgaaa ggtgctatgt aaatggaaat
3300
acaaaggatt cttactaaca taaaaaata atgcacaaca gaaatatcta aaaccttttc
3360
cgtagacttt gaaacatctc tctctgtcat aactccctgg attcaagtag cacattggta
3420
ataggatca gagcagtcta gagacaattg catgtcaaaa aatgtacatt cttttttagg
3480
tggtataaag taaacataga aattatgtta tggctaaata cagttagtgg gtaacttaga
3540
tttataatag ctagcatcta atttgacaaa ctagaacaca tcccagaaca attactgaaa
3600
agctgaaatt taatgggtgg tgatgtagcc caatgagggc gaatgacatt ccagcttgac
3660
ctctccagaa cactaatatc ctaaaataca gaacatgctg ggttaagtgc attagtgcct
3720
caagcagaaa atgctgaaaa caacgtgtaa agtactgaat ctgagtaggc tgacctgag
3780
aaggggacaat taaagagaca accaaggga cacattgaga ctacaaaaat atgaataatc
3840
tcaattatat tcatcacact tttttcatc catttcaaga aacgactaga cagttagtaac
3900
cacatgaata ttttactttc tccagtatac cttgagaagc aaactttgta ggaagccact
3960
cttctccctt aaacaacttc tgccaaacaa taataaagcc aactggaaac gaatcggagc
4020
cattttcatt ttcttaaccg gggcctgaca tgctttaaat tatctggctg tattctaaat
4080
caacacctaa cccctcaagg aaactgaaga atcaatatac agggtaatag ctttggctca
4140
gagctccaat aatgtgcttc agatctgtcc atgtggaaat gctttcatcc aaatttttaa
4200
attggtgggt accaaagagt tcacaaaaca ggtttgatg tagcaccttt catgcaaggc
4260
atgcaaaaag cctattttta aatcactgtg catattatag agttgtagcc acctcacaat
4320
gaagtactac agcctgtgct gtcttaatgg tttatgtcag gaaatgaaaa agatactgta
4380
ccaaatctgg aattacaatg gggagtaata atgtatacta aatgactttt gtattttaag
4440
ttactttttg tgagtgggtg atttttgtgt tttcttttcc agctacactt agtcttgaga
4500
tgtatttttt cttaagtct tgaatgaata caaaaggagc ccattttata atataaacct
4560
tgatgtacat gttgagatat ttggacaatg aaaatgcctt aaaaggaatg catatggata
4620
aagtgtgact tataacaccc ttcaacaaaa tctaatttta aattgtcttt ttcttttcta
4680

ttaaggggtt tctttttcag tgtctaccat tgtacttata actgttatta aataccaaat
 4740
 caaataatat aaaagctgta acatttcctt taaaactaat gctaataagg gatttagagt
 4800
 tgaatggcaa aatgtttatt acttggcaat acctgatgtc agtcacaggc atccaactca
 4860
 tgacaagaga taccactgtt tgttttttaa aaaacatttt tcattttgtt tctccttcaa
 4920
 aaattaagtt ggactaacat tcacgtatca aactaatata aaaagaaata aaaccaagag
 4980
 gtgatttttg taaaaaaaaa aaa
 5003

<210> 3516

<211> 547

<212> PRT

<213> Homo sapiens

<400> 3516

Gln	Gln	Leu	Asp	Ile	Thr	Ser	Thr	Lys	Leu	Asn	Asn	Gln	Cys	Glu	Leu
1				5					10					15	
Leu	Ser	Gln	Leu	Lys	Gly	Asn	Leu	Glu	Glu	Asn	Arg	His	Leu	Leu	
			20					25				30			
Asp	Gln	Ile	Gln	Thr	Leu	Met	Leu	Gln	Asn	Arg	Thr	Leu	Leu	Glu	Gln
			35					40				45			
Asn	Met	Glu	Ser	Lys	Asp	Leu	Phe	His	Val	Glu	Gln	Arg	Gln	Tyr	Ile
	50					55				60					
Asp	Lys	Leu	Asn	Glu	Leu	Arg	Gln	Lys	Glu	Lys	Leu	Glu	Glu	Lys	
65					70				75					80	
Ile	Met	Asp	Gln	Tyr	Lys	Phe	Tyr	Asp	Pro	Ser	Pro	Pro	Arg	Arg	Arg
				85					90					95	
Gly	Asn	Trp	Ile	Thr	Leu	Lys	Met	Arg	Lys	Leu	Ile	Lys	Ser	Lys	Lys
			100					105					110		
Asp	Ile	Asn	Arg	Glu	Arg	Gln	Lys	Ser	Leu	Thr	Leu	Thr	Pro	Thr	Arg
			115				120					125			
Ser	Asp	Ser	Ser	Glu	Gly	Phe	Leu	Gln	Leu	Pro	His	Gln	Asp	Ser	Gln
	130					135					140				
Asp	Ser	Ser	Ser	Val	Gly	Ser	Asn	Ser	Leu	Glu	Asp	Gly	Gln	Thr	Leu
145					150					155					160
Gly	Thr	Lys	Lys	Ser	Ser	Thr	Met	Asn	Asp	Leu	Val	Gln	Ser	Met	Val
				165					170					175	
Leu	Ala	Gly	Gln	Trp	Thr	Gly	Ser	Thr	Glu	Asn	Leu	Glu	Val	Pro	Asp
			180					185					190		
Asp	Ile	Ser	Thr	Gly	Lys	Arg	Arg	Lys	Glu	Leu	Gly	Ala	Met	Ala	Phe
			195				200					205			
Ser	Thr	Thr	Ala	Ile	Asn	Phe	Ser	Thr	Val	Asn	Ser	Ser	Ala	Gly	Phe
	210					215					220				
Arg	Ser	Lys	Gln	Leu	Val	Asn	Asn	Lys	Asp	Thr	Thr	Ser	Phe	Glu	Asp
225					230					235					240
Ile	Ser	Pro	Gln	Gly	Val	Ser	Asp	Asp	Ser	Ser	Thr	Gly	Ser	Arg	Val
				245					250					255	
His	Ala	Ser	Arg	Pro	Ala	Ser	Leu	Asp	Ser	Gly	Arg	Thr	Ser	Thr	Ser
			260					265					270		
Asn	Ser	Asn	Asn	Asn	Ala	Ser	Leu	His	Glu	Val	Lys	Ala	Gly	Ala	Val

275 280 285
 Asn Asn Gln Ser Arg Pro Gln Ser His Ser Ser Gly Glu Phe Ser Leu
 290 295 300
 Leu His Asp His Glu Ala Trp Ser Ser Ser Gly Ser Ser Pro Ile Gln
 305 310 315 320
 Tyr Leu Lys Arg Gln Thr Arg Ser Ser Pro Val Leu Gln His Lys Ile
 325 330 335
 Ser Glu Thr Leu Glu Ser Arg His His Lys Ile Lys Thr Gly Ser Pro
 340 345 350
 Gly Ser Glu Val Val Thr Leu Gln Gln Phe Leu Glu Glu Ser Asn Lys
 355 360 365
 Leu Thr Ser Val Gln Ile Lys Ser Ser Ser Gln Glu Asn Leu Leu Asp
 370 375 380
 Glu Val Met Lys Ser Leu Ser Val Ser Ser Asp Phe Leu Gly Lys Asp
 385 390 395 400
 Lys Pro Val Ser Cys Gly Leu Ala Arg Ser Val Ser Gly Lys Thr Pro
 405 410 415
 Gly Asp Phe Tyr Asp Arg Arg Thr Thr Lys Pro Glu Phe Leu Arg Pro
 420 425 430
 Gly Pro Arg Lys Thr Glu Asp Thr Tyr Phe Ile Ser Ser Ala Gly Lys
 435 440 445
 Pro Thr Pro Gly Thr Gln Gly Lys Ile Lys Leu Val Lys Glu Ser Ser
 450 455 460
 Leu Ser Arg Gln Ser Lys Asp Ser Asn Pro Tyr Ala Thr Leu Pro Arg
 465 470 475 480
 Ala Ser Ser Val Ile Ser Thr Ala Glu Gly Thr Thr Arg Arg Thr Ser
 485 490 495
 Ile His Asp Phe Leu Thr Lys Asp Ser Arg Leu Pro Ile Ser Val Asp
 500 505 510
 Ser Pro Pro Ala Ala Ala Asp Ser Asn Thr Thr Ala Ala Ser Asn Val
 515 520 525
 Asp Lys Val Gln Glu Ser Arg Asn Ser Lys Ser Arg Ser Arg Glu Gln
 530 535 540
 Gln Ser Ser
 545

<210> 3517

<211> 342

<212> DNA

<213> Homo sapiens

<400> 3517

acgcgtgtga tcgtccgtgc gtctagcctt tgcccacgca ggtatgaaca cccggagtgc
 60
 acctggcggg aggacccctt tcaggctgct ttggcccgat cctgacttta gtgctggcgc
 120
 cctttgcttt ccattcgcta tagtggcctc ctttgtcctt gcgggggaaa ccgaggccac
 180
 agccttgtag cgcattgctg atcgcccgac ttcccgcccc ctgctcgtgc gggcctcact
 240
 gtctccttct gggctggggg cttgcgacac cgccctccgg ccgactcgct cgtgggggtgc
 300
 ctgttggcag tggctgggtc actcgtgctc tggtcaggga ga
 342

<210> 3518
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 3518
 Met Asn Thr Arg Ser Ala Pro Gly Gly Arg Thr Pro Phe Arg Leu Leu
 1 5 10 15
 Trp Pro Asp Pro Asp Phe Ser Ala Gly Arg Leu Cys Phe Pro Ser Ala
 20 25 30
 Ile Val Ala Ser Phe Val Leu Ala Gly Glu Thr Glu Ala Thr Ala Leu
 35 40 45
 Gln Arg Met Pro Asp Arg Pro Thr Ser Arg Pro Leu Leu Val Arg Ala
 50 55 60
 Ser Leu Ser Pro Ser Gly Leu Gly Ala Cys Asp Thr Ala Leu Arg Pro
 65 70 75 80
 Thr Arg Ser Trp Gly Ala Cys Trp Gln Trp Leu Gly His Ser Cys Ser
 85 90 95
 Gly Gln Gly

<210> 3519
 <211> 2207
 <212> DNA
 <213> Homo sapiens

<400> 3519
 ccacagccca gccccggggc ccagccccct ggtggcaccc cggcagacgc cgggccaggc
 60
 cagggcagct cagaagaaaa accaaaactg ggggttggtg tgaacctgcc acctgcccag
 120
 ctgtcgtcca gcgatgagga gaccaggag gagctggccc gaattgggtt ggtgccaccc
 180
 cctgaagagt ttgccaacgg ggtcctgctg gccacccac tcgctggccc gggcccctcg
 240
 cccaccacgg tgcccagccc ggcctcaggg aagcccagca gtgagccacc cctgcccct
 300
 gagtctgcag ccgactctgg ggtggaggag gctgacacac gcagctccag cgacccccc
 360
 ctggagacca caagcaccat ctccacggtg tccagcatgt ccaccttgag ctgggagagc
 420
 ggggaactca ctgacaccca cacctccttc gctgacggac acacttttct actcgagaag
 480
 ccaccagtgc ctccaagcc caagctcaag tccccgctgg ggaaggggccc ggtgaccttc
 540
 agggacccgc tgctgaagca gtectcggac agcgagctca tggcccagca gcaccacgcc
 600
 gcctctgcgg ggctggcctc tgccgcccgg cctgcccggc ctgctacct cttccagaga
 660
 aggtccaagc tatgggggga ccccgaggag agccgggggc tccctgggccc tgaagacgac
 720
 aaaccaactg tgatcagtga gtcagctcc cgcctgcagc agctgaacaa ggacacgcgt
 780

tccttggggg aggaaccagt tggaggcctg ggcagcctgc tggaccctgc caagaagtcg
840
cccatcgag cagctcgggc tccccctccc tctttgggtc tgggggggtg gtatgtggat
900
gccacctctt gactcctgct tcttgctgcc tgggaagacca acctagtggg ccccgtagtg
960
tcagccttgg aggacagagt tcacagcgta gcaacgtgtt cagaacttaa ggactttgca
1020
ggtcttataa aggcctggcc attctacctt ctttagttca ggattcaaaa gacaggtagg
1080
agcttgggaa actcatgagg cctctcctaa ggtcccggga tgctgcctcc agctcctgtc
1140
atcctgggga attgctctgg ggtcctctcc ccttttagcc ttttccaact ctcagccaaa
1200
ctggaaagcc ctcttcccag cagtgcagtg ttgaagggtc ccgtagaatg ggtgttataa
1260
tcagagttag cagcctgggc ctaggcctct gtacaggacc agaccctga ggctgggggc
1320
tcttgacca cactgacca gccccatct tccctctctg cttctccctc cgtctctctc
1380
tgctcttgg tcttgatgaa aatcaaagcc attttaaaaa gtgcatagca cagtgcctgg
1440
cctggttcgg gccctcaata aacatttctt aaatggatga aagaacaaag caaaatgcaa
1500
atgctgtgtt ttgtgatttg agatctaggg aggtggctta ggacaaaaac ccacagaagg
1560
acttactcag cgttcagact catcagggtg cgatccccc tggtcgggct cagggtgggc
1620
caggctcgt cattggctct gtctctctct gtgaggcagc tgcagcagtt gcagggcagg
1680
gtcaggggat tcctcagccg gaacctctgg cacttccctt tctctgagtt catcctcca
1740
cgggtgctct tagcattctg tcttgatcag ggtacgggtc tcttagccct tggctctggc
1800
tttcaccagg accctgtttg ttttctcttc tcagatgtgg gatggggaag gacaagacca
1860
gcagccctga cccttacgtg atgtctgttc ttttactcag tagttcctgc aaaattctga
1920
tctctgattg gggtcatgtg ggtcctctgc ttttccctga ctgatcactg gggctctggg
1980
acatagggct gtcacgggc aagcttgagt cctctgttct cccaggagcc agggggatgg
2040
gtccgcccac ctagcaagca ggtgctgaga ttgaggggag ggggctctcc agatggaagt
2100
ccagtgtgt cccttgagta agtagatgct ggacagcctg tagcaaccaa tgttctgtga
2160
cacggccccc actggcatca gcaactcact tccttgccgg tcattgg
2207

<210> 3520

<211> 303

<212> PRT

<213> Homo sapiens

<400> 3520

Pro Gln Pro Ser Pro Arg Ala Gln Pro Pro Gly Gly Thr Pro Ala Asp
 1 5 10 15
 Ala Gly Pro Gly Gln Gly Ser Ser Glu Lys Pro Lys Leu Gly Leu
 20 25 30
 Val Val Asn Leu Pro Pro Ala Gln Leu Ser Ser Ser Asp Glu Glu Thr
 35 40 45
 Arg Glu Glu Leu Ala Arg Ile Gly Leu Val Pro Pro Pro Glu Glu Phe
 50 55 60
 Ala Asn Gly Val Leu Leu Ala Thr Pro Leu Ala Gly Pro Gly Pro Ser
 65 70 75 80
 Pro Thr Thr Val Pro Ser Pro Ala Ser Gly Lys Pro Ser Ser Glu Pro
 85 90 95
 Pro Pro Ala Pro Glu Ser Ala Ala Asp Ser Gly Val Glu Glu Ala Asp
 100 105 110
 Thr Arg Ser Ser Ser Asp Pro His Leu Glu Thr Thr Ser Thr Ile Ser
 115 120 125
 Thr Val Ser Ser Met Ser Thr Leu Ser Ser Glu Ser Gly Glu Leu Thr
 130 135 140
 Asp Thr His Thr Ser Phe Ala Asp Gly His Thr Phe Leu Leu Glu Lys
 145 150 155 160
 Pro Pro Val Pro Pro Lys Pro Lys Leu Lys Ser Pro Leu Gly Lys Gly
 165 170 175
 Pro Val Thr Phe Arg Asp Pro Leu Leu Lys Gln Ser Ser Asp Ser Glu
 180 185 190
 Leu Met Ala Gln Gln His His Ala Ala Ser Ala Gly Leu Ala Ser Ala
 195 200 205
 Ala Gly Pro Ala Arg Pro Arg Tyr Leu Phe Gln Arg Arg Ser Lys Leu
 210 215 220
 Trp Gly Asp Pro Val Glu Ser Arg Gly Leu Pro Gly Pro Glu Asp Asp
 225 230 235 240
 Lys Pro Thr Val Ile Ser Glu Leu Ser Ser Arg Leu Gln Gln Leu Asn
 245 250 255
 Lys Asp Thr Arg Ser Leu Gly Glu Glu Pro Val Gly Gly Leu Gly Ser
 260 265 270
 Leu Leu Asp Pro Ala Lys Lys Ser Pro Ile Ala Ala Ala Arg Ser Pro
 275 280 285
 Leu Ser Ser Leu Gly Leu Gly Trp Tyr Val Asp Ala Thr Ser
 290 295 300

<210> 3521

<211> 638

<212> DNA

<213> Homo sapiens

<400> 3521

caacgtcaac aagcaccggc gggccggcga gaaggcccgat atcctgcagg ccggcacgcc
 60
 gctggggctc atggcctacc tgtactccag tgatgccttc ctggagggtt atgtgcagca
 120
 attcctctac accttccgct acttctgcac accccaagac ttctgcact tctcctcga
 180
 ccgcatcaac agcacgtga ccagggccca ccaggacccc acctcgacct tcaccaagat
 240

ctacaggcgg agcctctgcg tctgcaggc ctgggtggag gactgctacg ctgtggactt
 300
 ccctcggaac agcgggctgc tggggaagct agaggacttc atctcctcca agatcctacc
 360
 cctggacggc tctgccaagc acctgctggg cctcctggag gtgggcatgg accggcgggc
 420
 cgagggaac cctcgcgga cagacctgga gaacccagg gaggccgagg aggantgcca
 480
 gaccttcaa cgccctctgt aagaggctct cagaggacgg catctccagg aagagcttcc
 540
 cctggaggct gccccgaggc aacgggctgg tgctgccgcc acacaaggag cgccctaca
 600
 ccattgctgc cgccctgccc aagccctgct tcctcgag
 638

<210> 3522

<211> 181

<212> PRT

<213> Homo sapiens

<400> 3522

Cys	Leu	Pro	Gly	Gly	Leu	Cys	Ala	Ala	Ile	Pro	Leu	His	Leu	Pro	Leu
1			5						10				15		
Leu	Leu	His	Thr	Pro	Arg	Leu	Pro	Ala	Leu	Pro	Pro	Arg	Pro	His	Gln
		20						25				30			
Gln	His	Ala	Asp	Gln	Gly	Pro	Pro	Gly	Pro	His	Leu	Asp	Leu	His	Gln
	35					40					45				
Asp	Leu	Gln	Ala	Glu	Pro	Leu	Arg	Pro	Ala	Gly	Leu	Gly	Gly	Gly	Leu
50						55					60				
Leu	Arg	Cys	Gly	Leu	Pro	Ser	Glu	Gln	Arg	Ala	Ala	Gly	Glu	Ala	Arg
65					70				75					80	
Gly	Leu	His	Leu	Leu	Gln	Asp	Pro	Thr	Pro	Gly	Arg	Leu	Cys	Gln	Ala
			85						90				95		
Pro	Ala	Gly	Pro	Pro	Gly	Gly	Gly	His	Gly	Pro	Ala	Gly	Arg	Gly	Gln
		100						105					110		
Pro	Ser	Arg	His	Arg	Pro	Gly	Glu	Pro	Gln	Gly	Gly	Arg	Gly	Gly	Xaa
		115					120					125			
Pro	Asp	Pro	Ser	Thr	Pro	Ser	Val	Arg	Gly	Ser	Gln	Arg	Thr	Ala	Ser
	130					135					140				
Pro	Gly	Arg	Ala	Ser	Pro	Gly	Gly	Cys	Pro	Glu	Ala	Thr	Gly	Trp	Cys
145					150					155				160	
Cys	Arg	His	Thr	Arg	Ser	Ala	Pro	Thr	Pro	Leu	Leu	Pro	Pro	Cys	Pro
			165					170						175	
Ser	Pro	Ala	Ser	Ser											
			180												

<210> 3523

<211> 2614

<212> DNA

<213> Homo sapiens

<400> 3523

nnactcctgg cagcccgcgg cccccgagca cgcgcctgac agccctgct ggccccggcg
 60

gcggcgctgc caggccagct catggccccc gaccggttg ccgcccagac cgcggctcag
120
ggacttaccc cgcgctactt cacctgggac gaggtggccc agcgcctcagg gtgcgaggag
180
cggtaggctag tgatcgaccg taagggtgtac aacatcagcg acttcagtcg ccggcatcca
240
gggggctccc gggatcatcag ccactacgcc gggcaggatg ccacggatcc ctttgtggcc
300
ttccacatca acaagggcct tgtgaagaag tatatgaact ctctcctgat tggagaactg
360
tctccagagc agcccagctt tgagcccacc aagaataaag agctgacaga tgagttccgg
420
gagctgcggg ccacagtggg gcggatgggg ctcatgaagg ccaaccatgt cttcttcctg
480
ctgtacctgc tgcacatctt gctgctggat ggtgcagcct ggctcaccct ttgggtcttt
540
gggacgtcct ttttgccctt cctcctctgt gcggtgctgc tcagtgcagt tcaggcccag
600
gctggctggc tgcagcatga ctttgggcac ctgtcgtctt tcagcacctc aaagtggaa
660
catctgctac atcattttgt gattggccac ctgaaggggg cccccgccag ttggtgga
720
cacatgcact tccagcacca tgccaagccc aactgcttcc gcaaagaccc agacatca
780
atgcatccct tcttctttgc cttggggaag atcctctctg tggagcttgg gaaacaga
840
aaaaaatata tgccgtacaa ccaccagcac aaatacttct tcctaattgg gccccagcc
900
ttgctgcctc tctacttcca gtggtatatt ttctatttt ttatccagcg aaagaagtgg
960
gtggacttgg tctggatgat taccttctac gtccgcttct tcctcactta tgtgccacta
1020
ttggggtga aagccttctt gggccttttc ttcatagtca ggttcctgga aagcaactgg
1080
tttgtgtggg tgacacagat gaaccatatt cccatgcaca ttgatcatga ccggaacatg
1140
gactgggttt ccaccagct ccaggccaca tgcaatgtcc acaagtctgc cttcaatgac
1200
tggttcagtg gacacctcaa cttccagatt gagcaccatc ttttccac gatgcctcga
1260
cacaattacc acaaagtggc tcccctggg cagtccttgt gtgccaagca tggcatagag
1320
taccagtcca agcccctget gtcagccttc gccgacatca tccactcact aaaggagtca
1380
gggcagctct ggctagatgc ctatcttcac caataacaac agccaccctg ccagtcctgg
1440
aagaagagga ggaagactct ggagccaagg cagaggggag cttgagggac aatgccacta
1500
tagtttaata ctcagagggg gttgggtttg gggacataaa gcctctgact caaactcctc
1560
ccttttatct tctagccaca gttctaagac ccaaagtggg gggtaggacac agaagtcctc
1620
aggaggaag gagctgttg ggcaggggtg taaattattt cctttttcta gtttggcaca
1680

tgcaggtagt tggatgaacag agagaaccag gagggtaaca gaagaggagg gacctactga
 1740
 acccagagtc aggaagagat ttaacactaa aattccactc atgccgggagc tggatggcacg
 1800
 cgcctgtaat cccagctacc caggaggctg aggcaggaga atcgcttgaa ccggggaggt
 1860
 ggaggttgca gtgagctgag atcacgccat tgtactccag cctgggagac agagcctcca
 1920
 tctccaaagg aaaaacaaaa gggtattctg tattgtaatt taaaaataaa atttcttcta
 1980
 tttgaatttt taaagttaaa aacgtaagta aatcctgtca ttgctaacag ggccacatat
 2040
 ggactcttac tctttcctct agaccccccag agtgtagaat gtgatacact tttgtccttt
 2100
 tctctgagga tgtgctgcct agtgctgtgg aatctgcctg accattgcaa gcatccaatt
 2160
 ttgtgaccag ttcttttgca ggaaattggt tctgagaaga ctggaagaca agaaatatcc
 2220
 cacctcttct aacaagatct gaattgttcg aaaagcagcc agtgcctaac ttgtagctcc
 2280
 acttatgcca actgtatata tacctctcgt gagcatagca agtgatttaa tattttgaaa
 2340
 agatggctaa aatcctttta atgaacagca ctaaagttat atgtattaga ggagaattat
 2400
 tgaatgagat ggagaaagag ttctgaaatt aatatttaca ttttggcttt tttacagata
 2460
 atattatatt tctgagtgac cagacgaaaag agaaggagta gaaaggatga ttcttctttg
 2520
 gccatcattt ggtacagtct catttccaag tcatgtataa tctttatggc ttccaaggac
 2580
 aagaattaaa atactctttt acgtaaaaaa aata
 2614

<210> 3524

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3524

Met	Ala	Pro	Asp	Pro	Leu	Ala	Ala	Glu	Thr	Ala	Ala	Gln	Gly	Leu	Thr
1				5				10					15		
Pro	Arg	Tyr	Phe	Thr	Trp	Asp	Glu	Val	Ala	Gln	Arg	Ser	Gly	Cys	Glu
		20					25						30		
Glu	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Ser	Asp	Phe
		35				40					45				
Ser	Arg	Arg	His	Pro	Gly	Gly	Ser	Arg	Val	Ile	Ser	His	Tyr	Ala	Gly
		50				55					60				
Gln	Asp	Ala	Thr	Asp	Pro	Phe	Val	Ala	Phe	His	Ile	Asn	Lys	Gly	Leu
65				70					75					80	
Val	Lys	Lys	Tyr	Met	Asn	Ser	Leu	Leu	Ile	Gly	Glu	Leu	Ser	Pro	Glu
				85				90						95	
Gln	Pro	Ser	Phe	Glu	Pro	Thr	Lys	Asn	Lys	Glu	Leu	Thr	Asp	Glu	Phe
			100					105					110		
Arg	Glu	Leu	Arg	Ala	Thr	Val	Glu	Arg	Met	Gly	Leu	Met	Lys	Ala	Asn

115	120	125	
His Val Phe Phe Leu Leu Tyr Leu Leu His Ile Leu Leu Leu Asp Gly			
130	135	140	
Ala Ala Trp Leu Thr Leu Trp Val Phe Gly Thr Ser Phe Leu Pro Phe			
145	150	155	160
Leu Leu Cys Ala Val Leu Leu Ser Ala Val Gln Ala Gln Ala Gly Trp			
165	170	175	
Leu Gln His Asp Phe Gly His Leu Ser Val Phe Ser Thr Ser Lys Trp			
180	185	190	
Asn His Leu Leu His His Phe Val Ile Gly His Leu Lys Gly Ala Pro			
195	200	205	
Ala Ser Trp Trp Asn His Met His Phe Gln His His Ala Lys Pro Asn			
210	215	220	
Cys Phe Arg Lys Asp Pro Asp Ile Asn Met His Pro Phe Phe Phe Ala			
225	230	235	240
Leu Gly Lys Ile Leu Ser Val Glu Leu Gly Lys Gln Lys Lys Lys Tyr			
245	250	255	
Met Pro Tyr Asn His Gln His Lys Tyr Phe Phe Leu Ile Gly Pro Pro			
260	265	270	
Ala Leu Leu Pro Leu Tyr Phe Gln Trp Tyr Ile Phe Tyr Phe Val Ile			
275	280	285	
Gln Arg Lys Lys Trp Val Asp Leu Val Trp Met Ile Thr Phe Tyr Val			
290	295	300	
Arg Phe Phe Leu Thr Tyr Val Pro Leu Leu Gly Leu Lys Ala Phe Leu			
305	310	315	320
Gly Leu Phe Phe Ile Val Arg Phe Leu Glu Ser Asn Trp Phe Val Trp			
325	330	335	
Val Thr Gln Met Asn His Ile Pro Met His Ile Asp His Asp Arg Asn			
340	345	350	
Met Asp Trp Val Ser Thr Gln Leu Gln Ala Thr Cys Asn Val His Lys			
355	360	365	
Ser Ala Phe Asn Asp Trp Phe Ser Gly His Leu Asn Phe Gln Ile Glu			
370	375	380	
His His Leu Phe Pro Thr Met Pro Arg His Asn Tyr His Lys Val Ala			
385	390	395	400
Pro Leu Val Gln Ser Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Ser			
405	410	415	
Lys Pro Leu Leu Ser Ala Phe Ala Asp Ile Ile His Ser Leu Lys Glu			
420	425	430	
Ser Gly Gln Leu Trp Leu Asp Ala Tyr Leu His Gln			
435	440		

<210> 3525

<211> 1116

<212> DNA

<213> Homo sapiens

<400> 3525

nnaaaaagcc acagaaaatg aacatccctt cagaatgggt ttgaagagct gatccagtgg

60

attaaagagg ggaaactggg agtttccaat taacaatgaa gcaggagctg actaaggctt

120

tggaacagaa accagatgat gcacaatatt attgtcaaag agcttattgt cacattcttc

180

ttgggagtta ctatggatct gtaaataact gacgaaaaac gcattctttt ctacatagtt
 240
 gctgttgctg atgcaaagaa gtctcgcgaa ttcaatccaa ataattccac tgctgtgctg
 300
 agaaaaggga tatgtgaata ccatttaaaa aactatgctg ctgctctaga aacttttata
 360
 ggaggacaaa aattangtgc agatgctaata ttcagtgaact ggattaaaag gtgtcaagaa
 420
 gctcagaatg gctcagaatc tgaggtggtg atggaaccag ccctggaagg cacaggcaaa
 480
 gaggggaaga aagcatcctc caggaagcgt acattggctg aacctccagc gaagggcctc
 540
 ctgcagccag tgaagctcag cagggcagaa ctgtacaagg agcctaccaa tgaggagctt
 600
 aatgccttc gggagactga gatcttgttc cactccagct tgcttcgttt acaggtagag
 660
 gagctactaa aggaagtaag gctgtcagag aagaagaagg atcggattga tgccttccta
 720
 cgggaggtca accagcgggt tgtgaggggt ccctcagtcc ctgagacaga gctcactgac
 780
 caggcatggc tcccagctgg ggttcgagtg cccctccacc aagtgccta tgccgtgaag
 840
 ggctgtttcc gcttcctgcc cccagcccag gttactgttg tgggcagcta ccttctgggc
 900
 acctgcatcc gaccagacat caatgtggat gtggcactga ccatgcccag ggaaatccta
 960
 caggacaagg acgggctgaa ccagcgctac ttccgcaagc gtgccctcta cctggcccac
 1020
 ttggctcacc acctggccca ggacccccctc tttggcagtg tttgcttctc ctacacaaat
 1080
 ggctgccacc tgaaccctc attgttgctc cggccg
 1116

<210> 3526

<211> 304

<212> PRT

<213> Homo sapiens

<400> 3526

Ile Thr Asp Glu Lys Arg Ile Phe Phe Tyr Ile Val Ala Val Ala Asp
 1 5 10 15
 Ala Lys Lys Ser Arg Glu Phe Asn Pro Asn Asn Ser Thr Ala Val Leu
 20 25 30
 Arg Lys Gly Ile Cys Glu Tyr His Leu Lys Asn Tyr Ala Ala Ala Leu
 35 40 45
 Glu Thr Phe Ile Gly Gly Gln Lys Leu Xaa Ala Asp Ala Asn Phe Ser
 50 55 60
 Asp Trp Ile Lys Arg Cys Gln Glu Ala Gln Asn Gly Ser Glu Ser Glu
 65 70 75 80
 Val Val Met Glu Pro Ala Leu Glu Gly Thr Gly Lys Glu Gly Lys Lys
 85 90 95
 Ala Ser Ser Arg Lys Arg Thr Leu Ala Glu Pro Pro Ala Lys Gly Leu
 100 105 110
 Leu Gln Pro Val Lys Leu Ser Arg Ala Glu Leu Tyr Lys Glu Pro Thr

115	120	125
Asn Glu Glu Leu Asn Arg Leu Arg Glu Thr Glu Ile Leu Phe His Ser		
130	135	140
Ser Leu Leu Arg Leu Gln Val Glu Glu Leu Leu Lys Glu Val Arg Leu		
145	150	155
Ser Glu Lys Lys Lys Asp Arg Ile Asp Ala Phe Leu Arg Glu Val Asn		
165	170	175
Gln Arg Val Val Arg Val Pro Ser Val Pro Glu Thr Glu Leu Thr Asp		
180	185	190
Gln Ala Trp Leu Pro Ala Gly Val Arg Val Pro Leu His Gln Val Pro		
195	200	205
Tyr Ala Val Lys Gly Cys Phe Arg Phe Leu Pro Pro Ala Gln Val Thr		
210	215	220
Val Val Gly Ser Tyr Leu Leu Gly Thr Cys Ile Arg Pro Asp Ile Asn		
225	230	235
Val Asp Val Ala Leu Thr Met Pro Arg Glu Ile Leu Gln Asp Lys Asp		
245	250	255
Gly Leu Asn Gln Arg Tyr Phe Arg Lys Arg Ala Leu Tyr Leu Ala His		
260	265	270
Leu Ala His His Leu Ala Gln Asp Pro Leu Phe Gly Ser Val Cys Phe		
275	280	285
Ser Tyr Thr Asn Gly Cys His Leu Lys Pro Ser Leu Leu Leu Arg Pro		
290	295	300

<210> 3527

<211> 2838

<212> DNA

<213> Homo sapiens

<400> 3527

cagggaattga aggtccgagg gtgagtgggc tgggcatgag ggctgtgggg cggggcgtgg
60
ggcgggcacc ctgcattctc ctcccgtggg tacattctct cctccgggac ctccgtcacc
120
ccgtctgtgc cagaggaacc attgtccctg ggtcccaggt ctgcttgagg agggactggg
180
ttggggagag atgaagacc tgtggaccag ggctcactct tcttctcttg tccccagg
240
ggctcctccg gccccagagg ggggcccggc cccccgggtc ctccaggggg tcctatccaa
300
ttgcaacaag atgatcttgg ggcagcttcc cagacgtgga tggacaccag tggagcactc
360
aggccagaga gttacagcta tccagaccgg ctggtgctgg accagggagg agagatcttt
420
aaaaccttac actacctcag caacctcacc cagagcatta agacgcccct gggcaccaaa
480
gagaaccccc cccgggtctg cagggaacctc atggactgtg agcagaagat ggtggatggt
540
acctactggg tggatccaaa ccttggtctg tectctgaca ccatcgaggt ctctgcaac
600
ttactcatg gtggacagac gtgtctcaag cccatcacgg cctccaaggt cgagtttgcc
660
atcagccggg tccagatgaa tttctgcac ctgctaagct ccgaggtgac ccagcacatc
720

accatccact gccttaacat gaccgtgtgg caggagggca ctgggcagac cccagccaag
780
caggccgtac gcttccgggc ctggaatgga cagatttttg aagctggggg tcagttccgg
840
cccgaagtgt ccatggatgg ctgcaaggtc caagatggcc gctggcatca gacactcttc
900
accttccgga cccaagaccc ccaacagctg cccatcatca gtgtggacaa cctccctcct
960
gcctcatcag ggaagcagta ccgcctggaa gttggacctg cgtgcttcct ctgacctctg
1020
acctcgtggc cactctaggc ctcatggagg agggaagagg aagaggcaag gggagggtac
1080
tgagggggcag atggctccag gagaggcagc tcccctgccc aagggtcctt gggcagaccc
1140
cagctgttgt ctgcccagta gaagtgggtg ggggtaggag gggatagggt gtccttggga
1200
acaatggatc ccagcttagc cccaaagacc aaccaaagag ccagccagag taagctggac
1260
ctgcaacctg cctgagcccc gtggcctctc agctctgcgg ccaccccggt cctccccag
1320
cttctgccc aaagagcccc acattcaagc caacttgagg gaagggggcg tctcgtcagc
1380
tggtccctgc tagggagcta ttgatgtgca atattagaaa ggagacatga aaaaaggaga
1440
aaaggaaaga cagaagtgtat tatatatatt atttaaaca aaaaaagaa ggtgcgttac
1500
tatttttttt tcacccggga aagaggtgag aggatgggaa ggagcagcca ggcgtgggaa
1560
gcggcgagat cctcgggctg ggggtgccc cgtttgtac ctcccactgt gaaatcgctg
1620
gtgctcacia ttgtctctca cagtgtatgt gattttttta aggaaaaaaa aaaatcccta
1680
ttaaagattc tgaagggtgct accattatct tgccacagac tttgaagaaa cttttggatg
1740
tggggcatca tccgcatctt tctctctcct ccaaatagaa aagtttgggg aatttttgaa
1800
ttttcctagc atcgcccttg tgctcatcag gtaatctgct aaggaggaaa aaagaaaaga
1860
aaaaaggaaa aaaaaaaaaa aaagcaaaac aaaaacaaaa aaaaaaaccc taccagaaac
1920
cagaagtaga gagatttacc atataactta tggactttga aatgtctgtc cttttaaggc
1980
agcaggagg cctgggtgag aacatgttgg cttggccttc acggtccttg agggagggtga
2040
ggctggcctt ggaaggcgtg ccctggagag gtcttgggtg aaaacttgac cttgaagaaa
2100
ccaatcacia aagcggcggt gggtcagggc taggcttaga ggtgaagcat caacatggaa
2160
ccatctcagg aagccgcac gcctcttccg aggtcctcac ttccaggagc ctgtccttgc
2220
aagatgcaat catcggttct gctttttcat tgtcattaaa ttctgtagaa acccattgtc
2280
attagctcca agtctaaatt tgggtcaagg agacagaata ataatgggaa tctcggagtt
2340

cgacaccata gtgacgttca gcgtectctg aattgtgcta catcagcgaa caagtcggcg
 2400
 cttgaattgg attttgaggt tattttaacc atggaattat ttttatagaa ggggaaaatg
 2460
 tatgtgaaaag tctctatttg tgtatttctc tcctaaagtt gtgtctcttt gggaattgga
 2520
 tttgattttt attatttaac acctcacttt ggcccgtccc cctcccaac acttctgtat
 2580
 cctcgccctg cgcgccagc ctggacgctc tgcgtggaag tgcgtgtttg tagcagctcg
 2640
 ggctcatct cagcgctcgg atccctcctg ctgccagaat ccactggcct ctgtctcatt
 2700
 cttgggtttt cctgctgtct tcgtttacgt ctctgtccac atgtcagtgt attaaaaccc
 2760
 caatgggttc cgtttctcct tttccctctt ggattttaaa taaatattta aaactgaggc
 2820
 aatggaaaaa aaaaaaaaa
 2838

<210> 3528

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3528

Gly	Gly	Thr	Gly	Leu	Gly	Arg	Asp	Glu	Asp	Pro	Val	Asp	Gln	Gly	Ser
1				5				10					15		
Leu	Phe	Phe	Ser	Cys	Ser	Pro	Arg	Gly	Pro	Pro	Gly	Pro	Arg	Gly	Arg
			20					25					30		
Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Gly	Pro	Ile	Gln	Leu	Gln	Gln	Asp
			35				40					45			
Asp	Leu	Gly	Ala	Ala	Phe	Gln	Thr	Trp	Met	Asp	Thr	Ser	Gly	Ala	Leu
	50					55				60					
Arg	Pro	Glu	Ser	Tyr	Ser	Tyr	Pro	Asp	Arg	Leu	Val	Leu	Asp	Gln	Gly
65					70				75					80	
Gly	Glu	Ile	Phe	Lys	Thr	Leu	His	Tyr	Leu	Ser	Asn	Leu	Ile	Gln	Ser
				85				90					95		
Ile	Lys	Thr	Pro	Leu	Gly	Thr	Lys	Glu	Asn	Pro	Ala	Arg	Val	Cys	Arg
			100					105					110		
Asp	Leu	Met	Asp	Cys	Glu	Gln	Lys	Met	Val	Asp	Gly	Thr	Tyr	Trp	Val
		115					120					125			
Asp	Pro	Asn	Leu	Gly	Cys	Ser	Ser	Asp	Thr	Ile	Glu	Val	Ser	Cys	Asn
		130				135					140				
Phe	Thr	His	Gly	Gly	Gln	Thr	Cys	Leu	Lys	Pro	Ile	Thr	Ala	Ser	Lys
145					150					155					160
Val	Glu	Phe	Ala	Ile	Ser	Arg	Val	Gln	Met	Asn	Phe	Leu	His	Leu	Leu
			165					170						175	
Ser	Ser	Glu	Val	Thr	Gln	His	Ile	Thr	Ile	His	Cys	Leu	Asn	Met	Thr
			180					185					190		
Val	Trp	Gln	Glu	Gly	Thr	Gly	Gln	Thr	Pro	Ala	Lys	Gln	Ala	Val	Arg
		195					200					205			
Phe	Arg	Ala	Trp	Asn	Gly	Gln	Ile	Phe	Glu	Ala	Gly	Gly	Gln	Phe	Arg
	210					215					220				
Pro	Glu	Val	Ser	Met	Asp	Gly	Cys	Lys	Val	Gln	Asp	Gly	Arg	Trp	His

225		230		235		240
Gln Thr Leu Phe Thr Phe Arg Thr Gln Asp Pro Gln Gln Leu Pro Ile						
		245		250		255
Ile Ser Val Asp Asn Leu Pro Pro Ala Ser Ser Gly Lys Gln Tyr Arg						
	260		265		270	
Leu Glu Val Gly Pro Ala Cys Phe Leu						
	275		280			

<210> 3529

<211> 3026

<212> DNA

<213> Homo sapiens

<400> 3529

```

agctgctggt gcaggtgcgg atagatttca tcctctgtcg cagcgagttt aatgacgcca
60
tcgtcatctc caaccggggc ctgcgggatg gagagctgtt tgaaattgtc attcagaaga
120
tgggtggaccg ctggtcagcg tccattgagg ctggagtgcg tgctattcgg cctgaagacc
180
tggaattccc caaccccatg acagacattg actatgacac atggatgctg agtggtagacg
240
ccatcatgca agacggtaac acgatgcgca acaattatgg gtgtgacctg gatgcgctgg
300
gcacaggtgc acgcattggc atgatgcgaa ctgccaaagg cgacctgcac tacttcatca
360
acggccagga ccaaggcgct gcctgctcgg gcctgcctcc ggagggtgat gcggtagtgc
420
atctctatgg ccagtgtgtc caagtgtcca tcaccaatgc caccggcccc atggacaaca
480
gcctggcgac cagcaacact gccaccgaga agtccttccc actgcnactc cccagtggct
540
ggcgtggctc accgattcca cagtacttgc ggcaagaacg tcactctaga ggaggatggc
600
acgagggcag tgcgtgccgc tggctatgct catggccttg tcttcagtac caaggagctg
660
agggctgagg aagtctttga ggtgaaagtg gaagagctag atgagaagtg ggcaggttcc
720
ctgcggctgg ggctgaccac actagcaccg ggggagatgg gaccgggggc aggcgggtgg
780
ggcccagggc tgctccttc cctgccagag ctccggacga agaccacttg gatggtatcc
840
agctgtgaag tgaggcgtga tgggcagctc cagaggatga actatggccg gaacctagag
900
aggctggggg tgaagtggct ggctccaggg acaggggagg ggttgggagt ggaggtagga
960
gggagagggt ggctgaacat cgtccgtcct tgtcctacct cggtcctagg tggggagccg
1020
tgtgggtgtt cgtcgggggg cagatgacac gatgcacatc ctggtggatg gagaggatat
1080
ggggcctgca gccactggca ttgccaaaga cgtgtgggct gtgttggatc tctacggggc
1140
agtccgcggt gtgtcaattg tcagttccac gagactggag gagtcagaag gcacccagcc
1200

```

tccttcccc agttcagaca ccggcagtgga gggcgaggag gatgacgagg gcgaggagca
1260
tggcctggga ggccagaatg aagtgggtat tatacccacc accctcgagt tcctggagaa
1320
ccatgggaag aatatccttt tgtctaattg gaaccgtacg gccacacggg tggccagcta
1380
caatcagggc atcgttgtca tcaaccaacc tctggtgccc cagctgctgg tgcaggtgcg
1440
gatagatttc ctaaaccgac agtggacatc ttcccttgct ctgggagtca tcacctgcgc
1500
gcctgagagg ctcaacttcc ctgcttctgc ctgtgccc c aaacgggcag cctggctgct
1560
gcggggccgt ggggtcttcc acaacggtct caagatctgc gagaagttt ggcccaatct
1620
ggacacgtgc cctgaaggca ccatacctggg actgcggtg gacagctctg gggggctgca
1680
tcttcattgt aatgggggtg accagggggg agctgtgcca gatgtgcccc agccctgcca
1740
tgcgcttggt gacctctatg ggcagtgtga gcaggtatca aagagagtgt gtgctggggg
1800
ccaccacctg ccgctagtcc tctaaagagc tgcgagtacc atgccctttg ctctcgttc
1860
caagaactcc tgctgcttcc cgaagattat ttcattgcct cgcctaaagc aagcctgtgc
1920
tactgtgagt cttgcccggaa gctgcgagga gacgaggccc acaggcgag aggggagcct
1980
ccccgggaat atgcactgcc ctttggtctg tgcaggttca acctcagagt gaatccccgc
2040
ctggaggctg ggacactaac caagaagtgg cacatggcat atcacgggag caatgttgcc
2100
gctgtacgga gagtgtgga ccgaggggag ctgggagcag gtactgcctc catcctgagc
2160
tgccgtcctt tgaagggaga acctggggta gggttcgagg agcctggcga gaactgtgca
2220
ctcctcggg aggagcagcc cctcctcggt ctgctttccc cctcccttca atatgctggg
2280
gcggagaccc tggcctccaa agtgcaattc cgggacccca aatcccagcg gacgcaccag
2340
gctcaggtg cgttccaggt gtgtgtgcgc cctggctcct acaccccggg acccccttcc
2400
gctgccttg gagaacctcc tgacctcac ttcagtccag ccgaacttga gtgggtcact
2460
aaggagaagg gggccacact cctctgtgcc ctgctggtac ggggtggaatg aggggtgaga
2520
caccactact acaagcacag tcgggcccgc ggcccatgga ctctgagtgg cgactgcctc
2580
cacctcattc ccgtgactcg tggcatgcgc aggtgctgga gcttggcagc cgcgcaggag
2640
catgtaggca ggctctcaga ttaggtggc aagtggcaca gctccatgtc cggaggccca
2700
gcactccgtc tgatgggagg agccgtggga gccagctcc aggccctggt acccctcttc
2760
atgcactgat ttggggaaca tgactccctt ttactccct accccacatc acttaattta
2820

tttccgtttt tgtttctggt tactgtgaat cccagaggag tctctccctg tgcccacatg
2880
aagctgcttt ttccggggcc accggggggg agtggggaag ggtggggcgca cggaagatgg
2940
gggcctctgt acagtgttta ctgactctga tttctaagga gcccaataaac accgtctcag
3000
agcaaaaaaaaa aaaaaaaaaa aaaaaa
3026

<210> 3530

<211> 206

<212> PRT

<213> Homo sapiens

<400> 3530

Met	Ala	Ser	Val	Ser	Lys	Cys	Pro	Ser	Pro	Met	Pro	Pro	Ala	Pro	Trp
1				5					10					15	
Thr	Thr	Ala	Trp	Arg	Pro	Ala	Thr	Leu	Pro	Pro	Arg	Ser	Pro	Ser	His
		20						25					30		
Cys	Xaa	Ser	Pro	Val	Ala	Gly	Val	Ala	His	Arg	Phe	His	Ser	Thr	Cys
	35					40						45			
Gly	Lys	Asn	Val	Thr	Leu	Glu	Asp	Gly	Thr	Arg	Ala	Val	Arg	Ala	
	50					55				60					
Ala	Gly	Tyr	Ala	His	Gly	Leu	Val	Phe	Ser	Thr	Lys	Glu	Leu	Arg	Ala
65					70					75				80	
Glu	Glu	Val	Phe	Glu	Val	Lys	Val	Glu	Glu	Leu	Asp	Glu	Lys	Trp	Ala
			85					90					95		
Gly	Ser	Leu	Arg	Leu	Gly	Leu	Thr	Thr	Leu	Ala	Pro	Gly	Glu	Met	Gly
		100						105					110		
Pro	Gly	Ala	Gly	Gly	Gly	Gly	Pro	Gly	Leu	Pro	Pro	Ser	Leu	Pro	Glu
		115					120					125			
Leu	Arg	Thr	Lys	Thr	Thr	Trp	Met	Val	Ser	Ser	Cys	Glu	Val	Arg	Arg
	130					135					140				
Asp	Gly	Gln	Leu	Gln	Arg	Met	Asn	Tyr	Gly	Arg	Asn	Leu	Glu	Arg	Leu
145					150					155				160	
Gly	Val	Lys	Trp	Leu	Ala	Pro	Gly	Thr	Gly	Glu	Gly	Leu	Gly	Val	Glu
			165					170						175	
Val	Ala	Gly	Arg	Gly	Gly	Leu	Asn	Ile	Val	Arg	Pro	Cys	Pro	Thr	Ser
		180						185					190		
Val	Leu	Gly	Gly	Glu	Pro	Cys	Gly	Cys	Ser	Ser	Gly	Gly	Arg		
		195					200						205		

<210> 3531

<211> 879

<212> DNA

<213> Homo sapiens

<400> 3531

nggatcctca gacttaggaa gggacgctct gaagatattt atagaattta cagccacgat
60
ggcaccgatt ctccccctga tgctgatgag gtggttatcg tctcaacaa cttcaaaagc
120
aaaattatta aagtgaaggt tcagaagaag gcagatatgg tgaacgaaga cttgctgagt
180

ccagcagcgg c
1151

<210> 3534

<211> 313

<212> PRT

<213> Homo sapiens

<400> 3534

```

Met Asn Val Asn Ser Met Asp Met Thr Gly Gly Leu Ser Val Lys Asp
 1              5              10              15
Pro Ser Gln Ser Gln Ser Arg Leu Pro Gln Trp Thr His Pro Asn Ser
      20              25              30
Met Asp Asn Leu Pro Ser Ala Ala Ser Pro Leu Glu Gln Asn Pro Ser
      35              40              45
Lys His Gly Ala Ile Pro Gly Gly Leu Ser Ile Gly Pro Pro Gly Lys
      50              55              60
Ser Ser Ile Asp Asp Ser Tyr Gly Arg Tyr Asp Leu Ile Gln Asn Ser
      65              70              75              80
Glu Ser Pro Ala Ser Pro Pro Val Ala Val Pro His Ser Trp Ser Arg
      85              90              95
Ala Lys Ser Asp Ser Asp Lys Ile Ser Asn Gly Ser Ser Ile Asn Trp
      100             105             110
Pro Pro Glu Phe His Pro Gly Val Pro Trp Lys Gly Leu Gln Asn Ile
      115             120             125
Asp Pro Glu Asn Asp Pro Asp Val Thr Pro Gly Ser Val Pro Thr Gly
      130             135             140
Pro Thr Ile Asn Thr Thr Ile Gln Asp Val Asn Arg Tyr Leu Leu Lys
      145             150             155             160
Ser Gly Gly Ser Ser Pro Pro Ser Ser Gln Asn Ala Thr Leu Pro Ser
      165             170             175
Ser Ser Ala Trp Pro Leu Ser Ala Ser Gly Tyr Ser Ser Ser Phe Ser
      180             185             190
Ser Ile Ala Ser Ala Pro Ser Val Ala Gly Lys Leu Ser Asp Ile Lys
      195             200             205
Ser Thr Trp Ser Ser Gly Pro Thr Ser His Thr Gln Ala Ser Leu Ser
      210             215             220
His Glu Leu Trp Lys Val Pro Arg Asn Ser Thr Ala Pro Thr Arg Pro
      225             230             235             240
Pro Pro Gly Leu Thr Asn Pro Lys Pro Ser Ser Thr Trp Gly Ala Ser
      245             250             255
Pro Leu Gly Trp Thr Ser Ser Tyr Ser Ser Gly Ser Ala Trp Ser Thr
      260             265             270
Asp Thr Ser Gly Arg Thr Ser Ser Trp Leu Val Leu Arg Asn Leu Thr
      275             280             285
Pro Gln Val Gln Tyr Gly Ala Pro Ala Ser Leu Ser Met Ile Gln Gly
      290             295             300
Gly Phe Pro Leu Gly Pro Gln Cys Arg
305              310

```

<210> 3535

<211> 723

<212> DNA

<213> Homo sapiens

<400> 3535

tccggacaaa gctctcagta tectgggtgc cattgtttct tctactcagc cgtgtttttt
 60
 ctactgagac agacaaacct tcagcccagg acagcagagg ccgtgggagt tcaggccaac
 120
 cggcagacct gctacaggtt ctctctgctg gtgaccaccc accccacaac cactcaagaa
 180
 gcctcatcaa aacattgttg gagaaaactg ggtgcccacg gaggagaaac ggaatgcaag
 240
 gagattgcaa tctgtgcttt gaaccagatg cactattact aatagctgga ggaaattttg
 300
 aagatcagct tagagaagaa gtggtccaga gagtttctct tctccttctc tattacatta
 360
 ttcatcagga agagatctgt tcttcaaagc tcaacatgag taataaagag tataaatttt
 420
 acctacacag cctactgagc ctcaggcagg atgaagattc ctctttcctt tcacagaatg
 480
 agacagaaga tatcttggtt ttcaccaggc agtactttga cactttctca agccagtgtg
 540
 tggaaaaccaa aacgctgcag aaaaaatctg gaatagttag cagtgaaggt gctaatagaa
 600
 gtacgcttcc tcagttggca gccatgatca ttactttgtc cctccagggt gtttgtctgg
 660
 gacaaggaaa cttgccttcc ccagactact ttacagaata tattttcagt tccttgaatc
 720
 gta
 723

<210> 3536

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3536

Met Gln Gly Asp Cys Asn Leu Cys Phe Glu Pro Asp Ala Leu Leu Leu
 1 5 10 15
 Ile Ala Gly Gly Asn Phe Glu Asp Gln Leu Arg Glu Glu Val Val Gln
 20 25 30
 Arg Val Ser Leu Leu Leu Leu Tyr Tyr Ile Ile His Gln Glu Glu Ile
 35 40 45
 Cys Ser Ser Lys Leu Asn Met Ser Asn Lys Glu Tyr Lys Phe Tyr Leu
 50 55 60
 His Ser Leu Leu Ser Leu Arg Gln Asp Glu Asp Ser Ser Phe Leu Ser
 65 70 75 80
 Gln Asn Glu Thr Glu Asp Ile Leu Ala Phe Thr Arg Gln Tyr Phe Asp
 85 90 95
 Thr Ser Gln Ser Gln Cys Met Glu Thr Lys Thr Leu Gln Lys Lys Ser
 100 105 110
 Gly Ile Val Ser Ser Glu Gly Ala Asn Glu Ser Thr Leu Pro Gln Leu
 115 120 125
 Ala Ala Met Ile Ile Thr Leu Ser Leu Gln Gly Val Cys Leu Gly Gln
 130 135 140
 Gly Asn Leu Pro Ser Pro Asp Tyr Phe Thr Glu Tyr Ile Phe Ser Ser

145
Leu Asn Arg

150

155

160

<210> 3537
<211> 714
<212> DNA
<213> Homo sapiens

<400> 3537
 tttttttttt tttttttttt tttttttttt tttttttttt agcaatatat atatataatt
 60
 tatttacatt cagcggcgat aaaaccccta tgtgccccgg cggccgggca aggctgtgta
 120
 cataaggcca agagtaagtg cgtgaatgca ctttaagacaa agtcaggaca cgagcttcac
 180
 atgacaggcc ccgcgtgggc gaccagccag ccctggggac gggcacgcca cgccacacac
 240
 acactcacca ctgtacagcc tgggactccc attgcatatt cacaggcccc gccgggcagg
 300
 gcacctcaag gctgggggag gggcaggggc agggaggagc cgtgggggtgt ccctgggtgg
 360
 gtggagaggg cagcatgtga gaggcaaatg tgcaccaaca ctgggcgtga gacgtgagca
 420
 gcctcagggtg tacggcatga gatgtgtgtg gttggggggt gtctcgtga cccgggaggg
 480
 ggggtgtgtg gagatgagca cagcaggcat gcgtggcacg tgctcgtgtg gtggtcgcgt
 540
 gcctgaatcc aggggctacc ccctgtccgg ctgtggccct cggtcctgca gggttggaag
 600
 aagggtcctt cagacgtgcc cctaccagc aggcacagaa atgtttgcat aagggtccagc
 660
 tcaggcagga gctctggggc cctggcccag gccagtggtg tgcgtgcatg gcca
 714

<210> 3538
<211> 154
<212> PRT
<213> Homo sapiens

<400> 3538
 Met His Ala His Thr Gly Pro Gly Pro Gly Pro Gln Ser Ser Cys Leu
 1 5 10 15
 Ser Trp Thr Leu Cys Lys His Phe Cys Ala Cys Trp Val Gly Ala Arg
 20 25 30
 Leu Lys Asp Pro Ser Ser Asn Pro Ala Gly Pro Arg Ala Thr Ala Gly
 35 40 45
 Gln Gly Val Ala Pro Gly Phe Arg His Ala Thr Thr Arg Ala Arg
 50 55 60
 Ala Thr His Ala Ser Cys Ala His Leu Thr His Thr Pro Leu Pro Gly
 65 70 75 80
 His Ala Asp Thr Pro Gln Pro His Thr Ser His Ala Val His Leu Arg
 85 90 95
 Leu Leu Thr Ser His Ala Gln Cys Trp Cys Thr Phe Ala Ser His Met

```

          100              105              110
Leu Pro Ser Pro Pro Thr Gln Gly His Pro Thr Ala Pro Pro Cys Pro
          115              120              125
Cys Pro Ser Pro Ser Leu Glu Val Pro Cys Pro Ala Gly Pro Val Asn
          130              135              140
Met Gln Trp Glu Ser Gln Ala Val Gln Trp
145              150

```

<210> 3539
 <211> 818
 <212> DNA
 <213> Homo sapiens

<400> 3539
 ngcgcgccag gggaagtgtc ccagcttggc tctggaagaa ccgaggggtcg tctgattctg
 60
 ggcaatgggg gtgcctgtgg tcccagctgc tcgggaggct gaggcggaat tgcttgagcg
 120
 cggggggcgg aggttgcagt gagccgagat cgcgcaggta cgctccagtc tgggcgacaa
 180
 gagegaaact cgatatcaaa aaaaaaaaaa acgtctctgat cccagagcct cttcacgcgt
 240
 cccctaccac agcacttcag agaagcaggt ctttaatcag tgtgtctaga tgcagctgct
 300
 gactgtcacc cctaccccg cttctctcca gtctgcggac ggccagtcac cccattgccc
 360
 cagaatcaga cgaccctcgg ttcttccaga gccaaagtgg gcaacttccc ctggcaagcc
 420
 ttcaccagta tccacggcgg tgggggcggg gccctgctgg gggacagatg gatcctcact
 480
 gctgcccaca ccgtctaccc caaggacagt gtttctctca ggaagaacca gagtgtgaat
 540
 gtgttcttgg gccacacagc catagatgag atgctgaaac tggggaacca ccctgtccac
 600
 cgtgtcgttg tgcaccccg ctaaccgtcag aatgagtccc ataactttag cggggacatc
 660
 gccctcctgg agctgcagca cagcatcccc ctgggccccca acgtctctccc ggtctgtctg
 720
 cccgataatg agaccctcta ccgcagcggc ttgttgggct acgtcagtgg gtttggcatg
 780
 gagatgggct ggctaactac tgagctgaag tactcgag
 818

<210> 3540
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 3540
 Ser Val Cys Leu Asp Ala Ala Asp Cys His Pro Tyr Pro Ala Ser
 1 5 10 15
 Leu Pro Val Cys Gly Arg Pro Val Thr Pro Ile Ala Gln Asn Gln Thr
 20 25 30
 Thr Leu Gly Ser Ser Arg Ala Lys Leu Gly Asn Phe Pro Trp Gln Ala

```

      35              40              45
Phe Thr Ser Ile His Gly Arg Gly Gly Gly Ala Leu Leu Gly Asp Arg
  50              55              60
Trp Ile Leu Thr Ala Ala His Thr Val Tyr Pro Lys Asp Ser Val Ser
  65              70              75              80
Leu Arg Lys Asn Gln Ser Val Asn Val Phe Leu Gly His Thr Ala Ile
      85              90              95
Asp Glu Met Leu Lys Leu Gly Asn His Pro Val His Arg Val Val Val
      100              105              110
His Pro Asp Tyr Arg Gln Asn Glu Ser His Asn Phe Ser Gly Asp Ile
      115              120              125
Ala Leu Leu Glu Leu Gln His Ser Ile Pro Leu Gly Pro Asn Val Leu
      130              135              140
Pro Val Cys Leu Pro Asp Asn Glu Thr Leu Tyr Arg Ser Gly Leu Leu
      145              150              155              160
Gly Tyr Val Ser Gly Phe Gly Met Glu Met Gly Trp Leu Thr Thr Glu
      165              170              175
Leu Lys Tyr Ser
      180

```

<210> 3541

<211> 722

<212> DNA

<213> Homo sapiens

<400> 3541

```

tctctccgac ggcgtgcagg tggccatttc aagaccgta ctaggtagat ggtcaattag
60
agttcccagg gtttgaagcc tgtaactgct gccgcgcctc aagccctcca gagcattgct
120
acggctgctg cctttgtact actacctcca aatacgttct tgctggtagt ggcggcagca
180
ggaccaatta cctctttttt gctctccctc gagaagctcc agatggcgctc ttccgtgggc
240
aacgtggccg acagcacaga accaacgaaa cgtatgcttt ccttccaagg gttagctgag
300
ttggcacatc gagaatatca ggcaggagat tttgaggcag ctgagagaca ctgcatgcag
360
ctctggagac aagagccaga caatactggt gtgcttttat tactttcatc tatacacttc
420
cagtgtcgaa ggctggacag atctgctcac tttagcactc tggcaattaa acagaacccc
480
cttctggcag aagcttattc gaatttgggg aatgtgtaca aggaaagagg gcagttgcag
540
gaggcaattg agcattatcg acatgcattg cgtctcaaac ctgatttcat cgatggttat
600
attaacgctg cagccgcctt ggtagcagcg ggtgacatgg aaggggcagt acaagcttac
660
gtctctgcac tccagcctgg gtgacaaagt gagggcctgt ctcaaaaaaa aaaaaaaaaa
720
aa
722

```

<210> 3542

<211> 153
 <212> PRT
 <213> Homo sapiens

<400> 3542

```

Met Ala Ser Ser Val Gly Asn Val Ala Asp Ser Thr Glu Pro Thr Lys
 1             5             10             15
Arg Met Leu Ser Phe Gln Gly Leu Ala Glu Leu Ala His Arg Glu Tyr
      20             25             30
Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His Cys Met Gln Leu Trp
      35             40             45
Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu Leu Leu Ser Ser Ile
      50             55             60
His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala His Phe Ser Thr Leu
      65             70             75             80
Ala Ile Lys Gln Asn Pro Leu Leu Ala Glu Ala Tyr Ser Asn Leu Gly
      85             90             95
Asn Val Tyr Lys Glu Arg Gly Gln Leu Gln Glu Ala Ile Glu His Tyr
      100            105            110
Arg His Ala Leu Arg Leu Lys Pro Asp Phe Ile Asp Gly Tyr Ile Asn
      115            120            125
Ala Ala Ala Ala Leu Val Ala Ala Gly Asp Met Glu Gly Ala Val Gln
      130            135            140
Ala Tyr Val Ser Ala Leu Gln Pro Gly
145            150

```

<210> 3543
 <211> 1206
 <212> DNA
 <213> Homo sapiens

<400> 3543

```

nntcagagtt ttgagttaag agctcaccat ttaatatata aattagtagt tcagaatctc
60
cagctaataa aagtatttta tgaatgctgt ccttaagacc gagtaacagc attgtgttca
120
gtttgggttg tgctcaggat gtgtaatatg ttctcttcag ccataagcca cgcttggtag
180
atattaattg agtggagaga tcttgacact cttccagtta tgcatttggt gttgtcgtc
240
tgatttggag cacttgaag atcactgttt tgtgttctac gacccaattg agaggattat
300
gtggagctaa gttttaccaa tcaggatcat ccttccttgt gggtagcag gcagttataa
360
gattgcaaaa tgggtctccg gattcacttt gttgttgacc cacatgggtg gtgctgcatg
420
ggtttgattg tctttgtttg gttatacaat attgttttaa tccccaaat tgcctctttt
480
cctcactatg aagaaggaca tattccaggc atattaataa taatattcta tggcatttcc
540
atattctgtc tgggtgcctt agtgagggcc tccataactg atccaggaag actccctgag
600
aaccccaaga tcccatatgg agaaagggag ttctgggaat tatgtaacaa gtgtaatttg
660

```

atgagaccaa agcggtccca tcaactgtagc cgctgcggcc actgtgtgag gagaatggat
 720
 catcactgtc catggattaa caattgtgtt ggtgaagata atcattggct ctttctgcag
 780
 ttgtgtttct aactgaact tcttacttgc tacgcactga tgttttcttt ctgccactat
 840
 tactattttc ttccactaaa aaagcgtaat ttggacctct ttgttttttag acatgaattg
 900
 gccataatga gactagcagc ctttatgggc attactatgt tagttggaat aactggactc
 960
 ttttacactc aactaattgg catcatcaca ccttgcagtc tcatcctact caagtgtggc
 1020
 tctgtatcca acaacagtct tggagatctc atgaagattt ctgaaacttt tgctctgagg
 1080
 ataccttctt ttgtggttat gtgccctgaa aactccagcc tccgtgtctt caattcagtg
 1140
 aaactactac tctgcttggg tccccctctt atacaatggg ctaccaagtg actgcaaaca
 1200
 gaaatc
 1206

<210> 3544

<211> 273

<212> PRT

<213> Homo sapiens

<400> 3544

Met	Gly	Leu	Arg	Ile	His	Phe	Val	Val	Asp	Pro	His	Gly	Trp	Cys	Cys
1				5					10					15	
Met	Gly	Leu	Ile	Val	Phe	Val	Trp	Leu	Tyr	Asn	Ile	Val	Leu	Ile	Pro
		20					25						30		
Lys	Ile	Val	Leu	Phe	Pro	His	Tyr	Glu	Glu	Gly	His	Ile	Pro	Gly	Ile
	35						40					45			
Leu	Ile	Ile	Ile	Phe	Tyr	Gly	Ile	Ser	Ile	Phe	Cys	Leu	Val	Ala	Leu
	50					55					60				
Val	Arg	Ala	Ser	Ile	Thr	Asp	Pro	Gly	Arg	Leu	Pro	Glu	Asn	Pro	Lys
65					70				75					80	
Ile	Pro	His	Gly	Glu	Arg	Glu	Phe	Trp	Glu	Leu	Cys	Asn	Lys	Cys	Asn
			85						90					95	
Leu	Met	Arg	Pro	Lys	Arg	Ser	His	His	Cys	Ser	Arg	Cys	Gly	His	Cys
			100					105						110	
Val	Arg	Arg	Met	Asp	His	His	Cys	Pro	Trp	Ile	Asn	Asn	Cys	Val	Gly
			115				120					125			
Glu	Asp	Asn	His	Trp	Leu	Phe	Leu	Gln	Leu	Cys	Phe	Tyr	Thr	Glu	Leu
	130					135					140				
Leu	Thr	Cys	Tyr	Ala	Leu	Met	Phe	Ser	Phe	Cys	His	Tyr	Tyr	Tyr	Phe
145					150					155					160
Leu	Pro	Leu	Lys	Lys	Arg	Asn	Leu	Asp	Leu	Phe	Val	Phe	Arg	His	Glu
			165						170					175	
Leu	Ala	Ile	Met	Arg	Leu	Ala	Ala	Phe	Met	Gly	Ile	Thr	Met	Leu	Val
		180						185					190		
Gly	Ile	Thr	Gly	Leu	Phe	Tyr	Thr	Gln	Leu	Ile	Gly	Ile	Ile	Thr	Pro
		195					200					205			
Cys	Ser	Leu	Ile	Leu	Leu	Lys	Cys	Gly	Ser	Val	Ser	Asn	Asn	Ser	Leu

210	215	220
Gly Asp Leu Met Lys Ile Ser Glu Thr Phe Ala Leu Arg Ile Pro Ser		
225	230	235
Phe Val Val Met Cys Pro Glu Asn Ser Ser Leu Arg Val Phe Asn Ser		240
	245	250
Val Lys Leu Leu Cys Leu Asp Ser Pro Leu Ile Gln Trp Ser Thr		255
	260	265
		270

Lys

<210> 3545

<211> 3657

<212> DNA

<213> Homo sapiens

<400> 3545

```

cctaggctgt tggagactga gtgagtgaat gtgtggagag tactaggctt ggacacaggcc
60
agagcagggtg ctccaggaggt ctggcccatc atctggctcc ggctgaccct tgccctcacc
120
ctggcagacc ctggctgggc atccatcagc aggggtgtgc tgggtgtgtga cgagtgtctgc
180
agcgtgcacc ggagcctggg acgccacatc tccattgtca agcaccttcg ccacagcgcc
240
tggcctccca cgctgctgca gatggtgcac acgcttgcca gcaacggggc caactccatc
300
tgggagcact ccctgctgga ccccgacaaa gtgcagagcg gccggcgtaa agccaacccc
360
caagacaaaag tccaccccat caagtcagag ttcacagggg ccaagtacca gatgctggca
420
tttgtgcaca agcttcctctg ccgggacgat gatggagtca ccgccaaaaga cctcagcaag
480
caactacact cgagcgtgcg gacaggcaac ctggagacat gtctgcgctt gctctcctg
540
ggtgccagg ccaacttctt ccacccagag aagggcacca cacctctgca cgtggctgcc
600
aaggcaggac agacactgca ggccgagctg cttgtagtgt atggggctga ccctggctcc
660
cctgatgtta atggccgcac acccattgac tatgccaggc aggcggggca ccatgagctg
720
gcggaaaaggc tgggtgagtg ccaatatgag ctactgacc ggctggcctt ctacctctgt
780
ggacgcaagc cggatcacia gaatgggcat tacatcatcc cacagatggc tgacagatct
840
cggcaaaaagt gcatgtctca gaccttgac ttatccgaat tggccaaaagc tgctaagaag
900
aagctgcagg cgctcagcaa ccggcttttt gaggaactcg ccatggacgt gtatgacgag
960
gtggatcgaa gagaaaatga tgcagtgtgg ctggctaccc aaaaccacag cactctggtg
1020
acagagcgca gtgctgtgcc ctctctgctt gttaaccggg aatactcagc cagcggaat
1080
cagggcgac aaaagctggc ccgctttaat gcccagagat ttgccacctt gatcatcgac
1140

```

attctcagtg aggccaaagcg gagacagcag ggcaagagcc tgagcagccc cacagacaac
1200
ctcgagctgt ctctgcggag ccagagtgaac ctcgacgacc aacacgacta cgacagcgtg
1260
gcctctgacg aggacacaga ccaggagccc ctgcgcagca ccggcgccac tcggagcaac
1320
cgggcccgga gcatggactc ctcggaacttg tctgacgggg ctgtgacgct gcaggagtac
1380
ctggagctga agaaggccct ggctacatcg gaggcaaagg tgcagcagct catgaaggte
1440
aacagtagcc tgagcgacga gctccggagg ctgcagcgag agcactttgc acccataatc
1500
cacaagctgc aggcggagaa cctgcagctc cggcagcctc cagggccggt gcccacacct
1560
ccactcccca gtgaacgggc ggaacacaca cccatggcgc caggcgggag cacacaccgc
1620
agggatcgcc aggccttttc catgtatgaa cctggctctg ccctgaagcc ctttgggggc
1680
ccccctgggg acgagctcac tacgcggctg cagcctttcc acagcactga gctagaggac
1740
gacgccatct attcagtga cgtccctgct ggccctttacc ggatccggaa aggggtgtct
1800
gcctcagctg tgcccttcac tccctcctcc ccgctgctgt cctgctccca ggagggaagc
1860
cgccacacga gcaagctttc ccgccacggc agtgagccg acagtacta tgagaacacg
1920
caaagtgggg acccactgct ggggctggaa ggggaagagg ttctagagct gggcaaagag
1980
gaagacttcc acccagagct ggaaagcctg gatggagacc tagatcctgg gcttcccagc
2040
acagaggatg tcatcttgaa gacagagcag gtcaccaaga acattcagga actgttgctg
2100
gcagcccagg agttcaagca tgacagcttc gtgccctgct cagagaagat ccatttggct
2160
gtgaccgaga tggcctccct cttcccaaag aggccagccc tggagccagt gcggagctca
2220
ctgcggctgc tcaacgccag cgcctaccgg ctgcagagtg agtgccggaa gacagtgcce
2280
ccagagcccc gcgccccagt ggacttccag ctgctgactc agcaggatgat ccagtgcgcc
2340
tatgacatcg ccaaggctgc caagcagctg gtcaccatca ccacccgaga gaagaagcag
2400
tgacctctct cccacacccc tcacctgcac cctaggacct cactggccat aggagctggg
2460
ccactccaga cattaatccc caccccaaca gagccactgg cacaagtgcc cttagtgtg
2520
ccacactccc tggcagccag gtgccctggg gccccacctc gtcgagcccc taaggatggg
2580
gaggtggggg ggcaggagct tctgtcccc acattccatg cacctccctc ctgtatatag
2640
catctcccc stcctagtga gcaggggcct gcaaggcatc actcccagcc cctcgcttc
2700
tagggcacc tcagcaaagg ggcaggtggg gacactccaa gtggggcagc tctccgtaca
2760

tgcgcccccac ccccatgagc cagttcagcc ctactggggg ctgagcgggg gcatccccc
 2820
 ctttgtacat agtctccatg gatgtccctg cctgttagcc accagcccct tgctgctctc
 2880
 cctttaatgc catatggccc ctgcctaggg cacaggcccc aacctgtgtg ctgggggtccc
 2940
 cagcagcaaa cactggaaaag tctgtttttt tttttcttcc ttcttcccca ccccttaatt
 3000
 ttaactttgt ggtaactgag tgccccgcg tgccctgcgtg ttgagtgtgt gggcggcagt
 3060
 gccgttccgg aggctgggtc catctggagt tttgaggggt gaggggacca gagcagtggg
 3120
 accagcatgg ggatcagctt ccttcccca cctgggagcc agggactgtc cgggtagcca
 3180
 gttttgggtc tgccagctgc ctccctgac cctcccact ctgccccctt ctctatgaac
 3240
 ttaaatcaaa aaccacttcc ctccatctcc tctgtctcct gcgtggaggg ggaatgtgtg
 3300
 ctggctaggg tggaggactg agcacctgag cctggggctg gctccccggg gtccccgact
 3360
 cagctggtgg ctgtggagct gagtccctc cccgtaacct ctgcaaggcc agcaccacc
 3420
 atcactacct gcacctgtg tgggtcccacc ctctggaggc ctgggaacct ggctgcagcc
 3480
 tgggaaggct ggagaggcag acggtgggac ccaccagctc tctccccatc ccgcttcttc
 3540
 cctggggggc aggccctacc tgtgtggtgg tgggtgggct gtcaagacgt gtcattgtaca
 3600
 tttgtatcaa aaataaagaa gtgaccatga aaaaaaaaaa aaaaaaaga ttttaat
 3657

<210> 3546

<211> 792

<212> PRT

<213> Homo sapiens

<400> 3546

Val	Asn	Val	Trp	Arg	Val	Leu	Gly	Leu	Ala	Gln	Ala	Arg	Ala	Gly	Ala
1				5				10						15	
Gln	Glu	Val	Trp	Pro	Ile	Ile	Trp	Leu	Arg	Leu	Thr	Leu	Ala	Leu	Thr
		20						25						30	
Leu	Ala	Asp	Pro	Gly	Trp	Ala	Ser	Ile	Ser	Arg	Gly	Val	Leu	Val	Cys
		35					40					45			
Asp	Glu	Cys	Cys	Ser	Val	His	Arg	Ser	Leu	Gly	Arg	His	Ile	Ser	Ile
	50					55				60					
Val	Lys	His	Leu	Arg	His	Ser	Ala	Trp	Pro	Pro	Thr	Leu	Leu	Gln	Met
65					70					75				80	
Val	His	Thr	Leu	Ala	Ser	Asn	Gly	Ala	Asn	Ser	Ile	Trp	Glu	His	Ser
			85					90						95	
Leu	Leu	Asp	Pro	Ala	Gln	Val	Gln	Ser	Gly	Arg	Arg	Lys	Ala	Asn	Pro
			100					105						110	
Gln	Asp	Lys	Val	His	Pro	Ile	Lys	Ser	Glu	Phe	Ile	Arg	Ala	Lys	Tyr
		115					120					125			
Gln	Met	Leu	Ala	Phe	Val	His	Lys	Leu	Pro	Cys	Arg	Asp	Asp	Asp	Gly

130		135		140	
Val Thr Ala Lys Asp Leu Ser Lys Gln Leu His Ser Ser Val Arg Thr					
145		150		155	160
Gly Asn Leu Glu Thr Cys Leu Arg Leu Leu Ser Leu Gly Ala Gln Ala					
	165		170		175
Asn Phe Phe His Pro Glu Lys Gly Thr Thr Pro Leu His Val Ala Ala					
	180		185		190
Lys Ala Gly Gln Thr Leu Gln Ala Glu Leu Leu Val Val Tyr Gly Ala					
	195		200		205
Asp Pro Gly Ser Pro Asp Val Asn Gly Arg Thr Pro Ile Asp Tyr Ala					
	210		215		220
Arg Gln Ala Gly His His Glu Leu Ala Glu Arg Leu Val Glu Cys Gln					
	225		230		235
Tyr Glu Leu Thr Asp Arg Leu Ala Phe Tyr Leu Cys Gly Arg Lys Pro					
	245		250		255
Asp His Lys Asn Gly His Tyr Ile Ile Pro Gln Met Ala Asp Arg Ser					
	260		265		270
Arg Gln Lys Cys Met Ser Gln Ser Leu Asp Leu Ser Glu Leu Ala Lys					
	275		280		285
Ala Ala Lys Lys Lys Leu Gln Ala Leu Ser Asn Arg Leu Phe Glu Glu					
	290		295		300
Leu Ala Met Asp Val Tyr Asp Glu Val Asp Arg Arg Glu Asn Asp Ala					
	305		310		315
Val Trp Leu Ala Thr Gln Asn His Ser Thr Leu Val Thr Glu Arg Ser					
	325		330		335
Ala Val Pro Phe Leu Pro Val Asn Pro Glu Tyr Ser Ala Thr Arg Asn					
	340		345		350
Gln Gly Arg Gln Lys Leu Ala Arg Phe Asn Ala Arg Glu Phe Ala Thr					
	355		360		365
Leu Ile Ile Asp Ile Leu Ser Glu Ala Lys Arg Arg Gln Gln Gly Lys					
	370		375		380
Ser Leu Ser Ser Pro Thr Asp Asn Leu Glu Leu Ser Leu Arg Ser Gln					
	385		390		395
Ser Asp Leu Asp Asp Gln His Asp Tyr Asp Ser Val Ala Ser Asp Glu					
	405		410		415
Asp Thr Asp Gln Glu Pro Leu Arg Ser Thr Gly Ala Thr Arg Ser Asn					
	420		425		430
Arg Ala Arg Ser Met Asp Ser Ser Asp Leu Ser Asp Gly Ala Val Thr					
	435		440		445
Leu Gln Glu Tyr Leu Glu Leu Lys Lys Ala Leu Ala Thr Ser Glu Ala					
	450		455		460
Lys Val Gln Gln Leu Met Lys Val Asn Ser Ser Leu Ser Asp Glu Leu					
	465		470		475
Arg Arg Leu Gln Arg Glu His Phe Ala Pro Ile Ile His Lys Leu Gln					
	485		490		495
Ala Glu Asn Leu Gln Leu Arg Gln Pro Pro Gly Pro Val Pro Thr Pro					
	500		505		510
Pro Leu Pro Ser Glu Arg Ala Glu His Thr Pro Met Ala Pro Gly Gly					
	515		520		525
Ser Thr His Arg Arg Asp Arg Gln Ala Phe Ser Met Tyr Glu Pro Gly					
	530		535		540
Ser Ala Leu Lys Pro Phe Gly Gly Pro Pro Gly Asp Glu Leu Thr Thr					
	545		550		555
Arg Leu Gln Pro Phe His Ser Thr Glu Leu Glu Asp Asp Ala Ile Tyr					

565 570 575
 Ser Val His Val Pro Ala Gly Leu Tyr Arg Ile Arg Lys Gly Val Ser
 580 585 590
 Ala Ser Ala Val Pro Phe Thr Pro Ser Ser Pro Leu Leu Ser Cys Ser
 595 600 605
 Gln Glu Gly Ser Arg His Thr Ser Lys Leu Ser Arg His Gly Ser Gly
 610 615 620
 Ala Asp Ser Asp Tyr Glu Asn Thr Gln Ser Gly Asp Pro Leu Leu Gly
 625 630 635 640
 Leu Glu Gly Lys Arg Phe Leu Glu Leu Gly Lys Glu Glu Asp Phe His
 645 650 655
 Pro Glu Leu Glu Ser Leu Asp Gly Asp Leu Asp Pro Gly Leu Pro Ser
 660 665 670
 Thr Glu Asp Val Ile Leu Lys Thr Glu Gln Val Thr Lys Asn Ile Gln
 675 680 685
 Glu Leu Leu Arg Ala Ala Gln Glu Phe Lys His Asp Ser Phe Val Pro
 690 695 700
 Cys Ser Glu Lys Ile His Leu Ala Val Thr Glu Met Ala Ser Leu Phe
 705 710 715 720
 Pro Lys Arg Pro Ala Leu Glu Pro Val Arg Ser Ser Leu Arg Leu Leu
 725 730 735
 Asn Ala Ser Ala Tyr Arg Leu Gln Ser Glu Cys Arg Lys Thr Val Pro
 740 745 750
 Pro Glu Pro Gly Ala Pro Val Asp Phe Gln Leu Leu Thr Gln Gln Val
 755 760 765
 Ile Gln Cys Ala Tyr Asp Ile Ala Lys Ala Ala Lys Gln Leu Val Thr
 770 775 780
 Ile Thr Thr Arg Glu Lys Lys Gln
 785 790

<210> 3547
 <211> 1039
 <212> DNA
 <213> Homo sapiens

<400> 3547
 agatctcaga aaatagttta tatttggtgt ggagaagatc atactgctgc tctaaccaag
 60
 gaaggtggag tgtttacttt tggagctgga gggatgggtc agttgggcca taattctacc
 120
 agtcatgaaa taaacccaag gaaagttttt gaacttatgg gaagcattgt cactgagatt
 180
 gcttggtggac ggcagcacac ttctgctttt gttccttcat caggacgaat ttactctttt
 240
 gggcttggtg gtaatgggca gctgggaacc gggtcaacaa gcaacaggaa aagccccttt
 300
 actgtaaaag gaaattggta cccctataat gggcagtgtc taccagatat tgattctgaa
 360
 gaatattttct gtgtaaaaag aattttctca gggggagatc aaagcttttc acattactct
 420
 agtccccaga actgtgggac accagatgac ttcagatgtc ccaatccgac aaagcagatc
 480
 tggacagtga atgaagctct aattcagaaa tggctgagct atccttcttg aaggtttcct
 540

gtggagatag ccaatgagat agatggaacg ttttcttctt ctggttgctt aaatggaagt
 600
 ttttttagctg ttagcaatga tgatcactat agaacaggta ccagattttc aggggttgat
 660
 atgaatgctg ctaggctttt attccacaaa cttatacaac ctgatcatcc gcagatatct
 720
 cagcagggtgg cagctagttt ggaaaagaat cttattccta aactgactag ctccttacct
 780
 gatgttgaag cattgagggtt ttatcttact ctaccagaat gtccctgat gagtgattcc
 840
 aacaatttca taacaatagc aattcccttt ggtacagctc ttgtgaacct agaaaaggca
 900
 ccactgaaag tacttgaaaa ctgggtggtca gtacttgaac ctccactatt cctcaagata
 960
 gtagaacttt ttaaggaagt tgtggtacat cttttgaaac tctacaagat cgggtattccc
 1020
 ctttctgaaa gaataatta
 1039

<210> 3548

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3548

Arg	Ser	Gln	Lys	Ile	Val	Tyr	Ile	Cys	Cys	Gly	Glu	Asp	His	Thr	Ala
1			5					10						15	
Ala	Leu	Thr	Lys	Glu	Gly	Gly	Val	Phe	Thr	Phe	Gly	Ala	Gly	Gly	Tyr
			20					25					30		
Gly	Gln	Leu	Gly	His	Asn	Ser	Thr	Ser	His	Glu	Ile	Asn	Pro	Arg	Lys
		35					40					45			
Val	Phe	Glu	Leu	Met	Gly	Ser	Ile	Val	Thr	Glu	Ile	Ala	Cys	Gly	Arg
	50					55					60				
Gln	His	Thr	Ser	Ala	Phe	Val	Pro	Ser	Ser	Gly	Arg	Ile	Tyr	Ser	Phe
65					70					75					80
Gly	Leu	Gly	Gly	Asn	Gly	Gln	Leu	Gly	Thr	Gly	Ser	Thr	Ser	Asn	Arg
				85					90					95	
Lys	Ser	Pro	Phe	Thr	Val	Lys	Gly	Asn	Trp	Tyr	Pro	Tyr	Asn	Gly	Gln
			100					105					110		
Cys	Leu	Pro	Asp	Ile	Asp	Ser	Glu	Glu	Tyr	Phe	Cys	Val	Lys	Arg	Ile
		115					120					125			
Phe	Ser	Gly	Gly	Asp	Gln	Ser	Phe	Ser	His	Tyr	Ser	Ser	Pro	Gln	Asn
	130					135					140				
Cys	Gly	Pro	Pro	Asp	Asp	Phe	Arg	Cys	Pro	Asn	Pro	Thr	Lys	Gln	Ile
145					150					155					160
Trp	Thr	Val	Asn	Glu	Ala	Leu	Ile	Gln	Lys	Trp	Leu	Ser	Tyr	Pro	Ser
			165						170					175	
Gly	Arg	Phe	Pro	Val	Glu	Ile	Ala	Asn	Glu	Ile	Asp	Gly	Thr	Phe	Ser
		180						185					190		
Ser	Ser	Gly	Cys	Leu	Asn	Gly	Ser	Phe	Leu	Ala	Val	Ser	Asn	Asp	Asp
		195					200					205			
His	Tyr	Arg	Thr	Gly	Thr	Arg	Phe	Ser	Gly	Val	Asp	Met	Asn	Ala	Ala
	210					215					220				
Arg	Leu	Leu	Phe	His	Lys	Leu	Ile	Gln	Pro	Asp	His	Pro	Gln	Ile	Ser

```

225          230          235          240
Gln Gln Val Ala Ala Ser Leu Glu Lys Asn Leu Ile Pro Lys Leu Thr
          245          250          255
Ser Ser Leu Pro Asp Val Glu Ala Leu Arg Phe Tyr Leu Thr Leu Pro
          260          265          270
Glu Cys Pro Leu Met Ser Asp Ser Asn Asn Phe Ile Thr Ile Ala Ile
          275          280          285
Pro Phe Gly Thr Ala Leu Val Asn Leu Glu Lys Ala Pro Leu Lys Val
          290          295          300
Leu Glu Asn Trp Trp Ser Val Leu Glu Pro Pro Leu Phe Leu Lys Ile
305          310          315          320
Val Glu Leu Phe Lys Glu Val Val Val His Leu Leu Lys Leu Tyr Lys
          325          330          335
Ile Gly Ile Pro Pro Ser Glu Arg Ile Ile
          340          345

```

<210> 3549
 <211> 2542
 <212> DNA
 <213> Homo sapiens

```

<400> 3549
caaacatcag aatcgattaa aaaaagtga gaaaagaagc gaataagttc caagagtcca
60
ggacatatgg taatactaga ccaaactaaa ggagatcatt gtagaccatc aagaagagga
120
agatatgaga aaattcatgg aagaagtaag gaaaaggaga gagctagtct agataaaaaa
180
agagataaag actacagaag gaaagagatc ttgccttttg aaaagatgaa ggaacaaagg
240
ttgagagaac atttagttcg ttttgaaagg ctgcgacgag caatggaact tcgaagacga
300
agagagattg cagagagaga gcgtcgagag cgagaacgca ttagaataat tcgtgaacgg
360
gaagaacggg aacgcttaca gagagagaga gagcgcttag aaattgaaag gcaaaaacta
420
gagagagaga gaatggaacg cgaacgcttg gaaagggaac gcattcgtat tgaacaggaa
480
cgtcgtaagg aagctgaacg gattgctcga gaaagagagg aactcagaag gcaacaacag
540
cagcttcggt atgaacaaga aaaaaggaat tccttgaaac gccacgtga tgtagatcat
600
aggcgagatg atccttactg gagcgagaat aaaaagttgt ctctagatac agatgcacga
660
tttggccatg gatccgacta ctctcgccaa cagaacagat ttaatgactt tgatcaccca
720
gagaggggca ggtttcctga gagttcagca gtacagtctt catcttttga aaggcgggat
780
cgctttgttg gtcaaagtga ggggaaaaaa gcacgaccta ctgcacgaag ggaagatcca
840
agcttcgaaa gatatcccaa aaatttcagt gactccagaa gaaatgagcc tccaccacca
900
agaaatgaac ttagagaatc agacaggcga gaagtacgag gggagcgaga cgaaaggaga
960

```

acgggtgatta ttcatgacag gcctgatatc actcatccta gacatcctcg agaggcaggg
1020
cccaatcctt ccagaccac cagctggaaa agtgatggaa gcatgtccac tgacaaacgg
1080
gaaacaagag ttgaaaggcc agaacgatct gggagagaag tatcagggca cagtgtgaga
1140
ggcgctcccc ctgggaatcg tagcagcgct tcgggggtacg ggagcagaga gggagacaga
1200
ggagtcatca cagaccgagg aggtggatca cagcactatc ctgaggagcg acatgtggtt
1260
gaacgccatg gacgggacac aagcggacca aggaaagagt ggcattggtcc accctctcaa
1320
gggcctagct atcatgatac gaggcgaatg ggtgacggcc gggcaggagc aggcattgata
1380
acccaacatt caagtaacgc atccccaatt aatagaattg taaaaatcag tggcaattcc
1440
atgccaagag gaagtggctc cggatttaag ccatttaagg gtggacctcc gcgacgatcc
1500
tgaaaaatgag ctctctgccca aggttttaag ataatttatt gaaatctcct gtaaaacttta
1560
cttgactact tatgaagagg acctctgact tgcttgagag ttctgtcaga cttttctttt
1620
taaaaattta acatgattgc ttttctcaat tttggagaag atgtttaaat agttctgttg
1680
taacttttaa tagttttgtg tatcattcaa ctttttttct tgcagcaccg aggcacattt
1740
gaaaagatgg aattgaagtc gttttgttta acgctgtgtg aatataaaga gtagtttgca
1800
gctgtgtggt agtggtttaa tttgcagcct tagctctgtg gtgtctggct ctagagttac
1860
ttctttttac caagcatttt cagcctccat tttgaaggct gtctacactt aagaagtctt
1920
agctgtctaa tttttagaga ataagattgt tcattgcatt tctgagtatt atgtaaccta
1980
tttttgaga aggtactggt acattaaagt catctgtgta tcctggttta aaaaaatgta
2040
atcttttttg aaataaacct tcatattctg tatagttgct aaagtgttga gaacctttt
2100
aattgtaaaa tgagaaccga ttttcagttt agtgtagcag cacacttggt caggtttgca
2160
tggtatgaaa ccaaatagat tcatgaaacc ttggccatga ggtttgtttc acaaggttct
2220
tagaccgagt tgtgcaggta agtgcacttt taggtaatct gcactgtttg tttgatggat
2280
aaattccatc tctgggaatt gtgtgggtat taatgtttcc atgttcccaa ctatgttgag
2340
aagtggaaaa aaaccagggt tctagatggg tgaatcagtt gggttttgta aatacttgta
2400
tgtggggaag acattgttgt ctttttggtga aaataaaaaa ccacacctgg aaaaaaaaaa
2460
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2520
aaaaaaaaaa aaaaaaaaaa aa
2542

<210> 3550
 <211> 500
 <212> PRT
 <213> Homo sapiens

<400> 3550

```

Gln Thr Ser Glu Ser Ile Lys Lys Ser Glu Glu Lys Lys Arg Ile Ser
 1           5           10           15
Ser Lys Ser Pro Gly His Met Val Ile Leu Asp Gln Thr Lys Gly Asp
 20           25           30
His Cys Arg Pro Ser Arg Arg Gly Arg Tyr Glu Lys Ile His Gly Arg
 35           40           45
Ser Lys Glu Lys Glu Arg Ala Ser Leu Asp Lys Lys Arg Asp Lys Asp
 50           55           60
Tyr Arg Arg Lys Glu Ile Leu Pro Phe Glu Lys Met Lys Glu Gln Arg
 65           70           75           80
Leu Arg Glu His Leu Val Arg Phe Glu Arg Leu Arg Arg Ala Met Glu
 85           90           95
Leu Arg Arg Arg Arg Glu Ile Ala Glu Arg Glu Arg Arg Glu Arg Glu
100           105           110
Arg Ile Arg Ile Ile Arg Glu Arg Glu Glu Arg Glu Arg Leu Gln Arg
115           120           125
Glu Arg Glu Arg Leu Glu Ile Glu Arg Gln Lys Leu Glu Arg Glu Arg
130           135           140
Met Glu Arg Glu Arg Leu Glu Arg Glu Arg Ile Arg Ile Glu Gln Glu
145           150           155           160
Arg Arg Lys Glu Ala Glu Arg Ile Ala Arg Glu Arg Glu Glu Leu Arg
165           170           175
Arg Gln Gln Gln Gln Leu Arg Tyr Glu Gln Glu Lys Arg Asn Ser Leu
180           185           190
Lys Arg Pro Arg Asp Val Asp His Arg Arg Asp Asp Pro Tyr Trp Ser
195           200           205
Glu Asn Lys Lys Leu Ser Leu Asp Thr Asp Ala Arg Phe Gly His Gly
210           215           220
Ser Asp Tyr Ser Arg Gln Gln Asn Arg Phe Asn Asp Phe Asp His Arg
225           230           235           240
Glu Arg Gly Arg Phe Pro Glu Ser Ser Ala Val Gln Ser Ser Ser Phe
245           250           255
Glu Arg Arg Asp Arg Phe Val Gly Gln Ser Glu Gly Lys Lys Ala Arg
260           265           270
Pro Thr Ala Arg Arg Glu Asp Pro Ser Phe Glu Arg Tyr Pro Lys Asn
275           280           285
Phe Ser Asp Ser Arg Arg Asn Glu Pro Pro Pro Pro Arg Asn Glu Leu
290           295           300
Arg Glu Ser Asp Arg Arg Glu Val Arg Gly Glu Arg Asp Glu Arg Arg
305           310           315           320
Thr Val Ile Ile His Asp Arg Pro Asp Ile Thr His Pro Arg His Pro
325           330           335
Arg Glu Ala Gly Pro Asn Pro Ser Arg Pro Thr Ser Trp Lys Ser Asp
340           345           350
Gly Ser Met Ser Thr Asp Lys Arg Glu Thr Arg Val Glu Arg Pro Glu
355           360           365
Arg Ser Gly Arg Glu Val Ser Gly His Ser Val Arg Gly Ala Pro Pro

```

```

      370              375              380
Gly Asn Arg Ser Ser Ala Ser Gly Tyr Gly Ser Arg Glu Gly Asp Arg
385              390              395              400
Gly Val Ile Thr Asp Arg Gly Gly Gly Ser Gln His Tyr Pro Glu Glu
      405              410              415
Arg His Val Val Glu Arg His Gly Arg Asp Thr Ser Gly Pro Arg Lys
      420              425              430
Glu Trp His Gly Pro Pro Ser Gln Gly Pro Ser Tyr His Asp Thr Arg
      435              440              445
Arg Met Gly Asp Gly Arg Ala Gly Ala Gly Met Ile Thr Gln His Ser
      450              455              460
Ser Asn Ala Ser Pro Ile Asn Arg Ile Val Gln Ile Ser Gly Asn Ser
465              470              475              480
Met Pro Arg Gly Ser Gly Ser Gly Phe Lys Pro Phe Lys Gly Gly Pro
      485              490              495
Pro Arg Arg Phe
      500

```

<210> 3551
 <211> 545
 <212> DNA
 <213> Homo sapiens

```

<400> 3551
nattcggcac gaggtaaagt ctattagaat ttgctagtaa aatttaaaaa ggtatgtgac
60
atttcttaag ataattgaga aagataaact tctttttcag gaggggccat cttcctgcc
120
tttcttgatga ctggctataa attccatgca gtgctggaat gtgcttctca cagtttagag
180
gctgagcacc tgttttattt cacactocct tgattcctgg ggtaaattccc atctccgcag
240
catgggctcc agttaaattc attagtgggc cagatgtgtg tccctgtca gctggccaag
300
taaccccaact gtttatcgac aggttctcag gaatcagata gctcgcagtc ggccaagaag
360
gacatgctgg ctgccttgaa gtccaggcag gaagctctgg aggaaacct gcgtcagagg
420
ctggaggaac tgaagaagct gtgtctccga gaagctgtaa gcctttccta gctcatcccg
480
ttgaaattgg tgtgtctgt gatgtcactg atctttctga tgtcatttga tctttttgat
540
gtcat
545

```

<210> 3552
 <211> 55
 <212> PRT
 <213> Homo sapiens

```

<400> 3552
Pro His Cys Leu Ser Thr Gly Ser Gln Glu Ser Asp Ser Ser Gln Ser
1          5          10          15
Ala Lys Lys Asp Met Leu Ala Ala Leu Lys Ser Arg Gln Glu Ala Leu

```

	20		25		30										
Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu	Cys	Leu
	35		40		45										
Arg	Glu	Ala	Val	Ser	Leu	Ser									
	50		55												

<210> 3553

<211> 1412

<212> DNA

<213> Homo sapiens

<400> 3553

tacacagtga ctatggatgt gcattccagg tacagaactg aggcccatca ggatgtggtg
 60
 ggaagattta atgaaagggtt tattctgtct ctggcctctt gtaagaagtg tctcgtcatt
 120
 gatgaccagc tcaacatcct gcccatctcc tcccacgttg ccaccatgga ggccctgcct
 180
 cccagaactc eggatgagag tcttggtcct tctgatctgg agctgaggga gttgaaggag
 240
 agettgagg acaccagcc tgtgggtgtg ttgggtggact gctgtaagac tctagaccag
 300
 gccaaagctg tcttgaaatt tatcgagggc atctctgaaa agaccctgag gagtactgtt
 360
 gcactcacag ctgctcgagg acggggaaaa tctgcagccc tgggattggc gattgctggg
 420
 gcggtggcat ttgggtactc caatatcttt gttacctccc caagccctga taacctccat
 480
 actctgtttg aatttgtatt taaaggattt gatgctctgc aatatcagga acatctggat
 540
 tatgagatta tccagtctct aaatcctgaa tttaacaaag cagtgatcat agtgaatgta
 600
 ttctgagaac acaggcagac tattcagtat atacatcctg cagatgctgt gaagctgggc
 660
 caggctgaac tagttgtgat tgatgaagct gccgccatcc cctcccccct ggtgaagagc
 720
 ctacttgccc cctaccttgt ttccatggca tccaccatca atggctatga gggcactggc
 780
 cggtcactgt ccctcaagct aattcagcag ctccgtcaac agagcgccca gagccaggtc
 840
 agcaccactg ctgagaataa gaccacgacg acagccagat tggcatcagc gcggacactg
 900
 catgagggtt ccctccagga gtcaatccga tacgcccctg gggatgcagt ggagaagtgg
 960
 ctgaatgact tgctgtgcct ggattgcctc aacatcactc ggatagtctc aggtgcccc
 1020
 ttgctgaag cttgtgaact gtactatgtt aatagagata cctctctttg ctaccacaag
 1080
 gctctgaag ttttcctcca acggcttatg gccctctacg tggcttctca ctacaagaac
 1140
 tctcccaatg atctccagat gctctccgat gcacctctc accatctctt ctgccttctg
 1200
 cctctgtgc cccccacca gaatgccctt ccaaaagtgc ttgctgttat ccaggatatg
 1260

gaacagaggc gtccttgtgg cagtgttttg ggggaaccact gaggcacag gaattagtgg
 1320
 ctttaataact gcattgtggg agttttgaaa ctgtggagtc ctggtctgga accaaggggc
 1380
 tgggtctgct gagacaggtg actaggggtgc ac
 1412

<210> 3554

<211> 419

<212> PRT

<213> Homo sapiens

<400> 3554

Tyr	Thr	Val	Thr	Met	Asp	Val	His	Ser	Arg	Tyr	Arg	Thr	Glu	Ala	His
1				5					10					15	
Gln	Asp	Val	Val	Gly	Arg	Phe	Asn	Glu	Arg	Phe	Ile	Leu	Ser	Leu	Ala
		20						25					30		
Ser	Cys	Lys	Lys	Cys	Leu	Val	Ile	Asp	Asp	Gln	Leu	Asn	Ile	Leu	Pro
	35						40					45			
Ile	Ser	Ser	His	Val	Ala	Thr	Met	Glu	Ala	Leu	Pro	Pro	Gln	Thr	Pro
	50					55					60				
Asp	Glu	Ser	Leu	Gly	Pro	Ser	Asp	Leu	Glu	Leu	Arg	Glu	Leu	Lys	Glu
65					70				75					80	
Ser	Leu	Gln	Asp	Thr	Gln	Pro	Val	Gly	Val	Leu	Val	Asp	Cys	Cys	Lys
			85					90					95		
Thr	Leu	Asp	Gln	Ala	Lys	Ala	Val	Leu	Lys	Phe	Ile	Glu	Gly	Ile	Ser
		100						105					110		
Glu	Lys	Thr	Leu	Arg	Ser	Thr	Val	Ala	Leu	Thr	Ala	Ala	Arg	Gly	Arg
	115						120					125			
Gly	Lys	Ser	Ala	Ala	Leu	Gly	Leu	Ala	Ile	Ala	Gly	Ala	Val	Ala	Phe
	130					135					140				
Gly	Tyr	Ser	Asn	Ile	Phe	Val	Thr	Ser	Pro	Ser	Pro	Asp	Asn	Leu	His
145					150				155					160	
Thr	Leu	Phe	Glu	Phe	Val	Phe	Lys	Gly	Phe	Asp	Ala	Leu	Gln	Tyr	Gln
			165					170						175	
Glu	His	Leu	Asp	Tyr	Glu	Ile	Ile	Gln	Ser	Leu	Asn	Pro	Glu	Phe	Asn
	180							185					190		
Lys	Ala	Val	Ile	Ile	Val	Asn	Val	Phe	Arg	Glu	His	Arg	Gln	Thr	Ile
	195					200						205			
Gln	Tyr	Ile	His	Pro	Ala	Asp	Ala	Val	Lys	Leu	Gly	Gln	Ala	Glu	Leu
	210				215						220				
Val	Val	Ile	Asp	Glu	Ala	Ala	Ala	Ile	Pro	Leu	Pro	Leu	Val	Lys	Ser
225				230					235					240	
Leu	Leu	Gly	Pro	Tyr	Leu	Val	Phe	Met	Ala	Ser	Thr	Ile	Asn	Gly	Tyr
			245					250						255	
Glu	Gly	Thr	Gly	Arg	Ser	Leu	Ser	Leu	Lys	Leu	Ile	Gln	Gln	Leu	Arg
		260					265					270			
Gln	Gln	Ser	Ala	Gln	Ser	Gln	Val	Ser	Thr	Thr	Ala	Glu	Asn	Lys	Thr
	275					280						285			
Thr	Thr	Thr	Ala	Arg	Leu	Ala	Ser	Ala	Arg	Thr	Leu	His	Glu	Val	Ser
	290				295						300				
Leu	Gln	Glu	Ser	Ile	Arg	Tyr	Ala	Pro	Gly	Asp	Ala	Val	Glu	Lys	Trp
305					310				315					320	
Leu	Asn	Asp	Leu	Leu	Cys	Leu	Asp	Cys	Leu	Asn	Ile	Thr	Arg	Ile	Val

```

          325          330          335
Ser Gly Cys Pro Leu Pro Glu Ala Cys Glu Leu Tyr Tyr Val Asn Arg
          340          345          350
Asp Thr Leu Phe Cys Tyr His Lys Ala Ser Glu Val Phe Leu Gln Arg
          355          360          365
Leu Met Ala Leu Tyr Val Ala Ser His Tyr Lys Asn Ser Pro Asn Asp
          370          375          380
Leu Gln Met Leu Ser Asp Ala Pro Ser His His Leu Phe Cys Leu Leu
          385          390          395          400
Pro Pro Val Pro Pro Thr Gln Asn Ala Leu Pro Lys Val Leu Ala Val
          405          410          415
Ile Gln Val

```

<210> 3555
 <211> 1038
 <212> DNA
 <213> Homo sapiens

```

<400> 3555
nngccggccg cgccccgggct gggacgtccg agcgggaaga tgttttccgc cctgaagaag
60
ctgggtggggc cggaccaggc cccggggccgg gacaagaaca tccccgccgg gctgcagtcc
120
atgaaccagg cgttcagag gcgcttcgcc aaggggggtgc agtacaacat gaagatagtg
180
atccggggag acaggaacac gggcaagaca gcgctgtggc accgcctgca gggccggccg
240
ttcgtggagg agtacatccc cacacaggag atccaggta ccagcatcca ctggagctac
300
aagaccacgg atgacatcgt gaaggttgaa gtctgggatg tagtagacaa aggaaaatgc
360
aaaaagcgag gcgacggctt aaagatggag aacgaccccc aggaggcgga gtctgaaatg
420
gccctggatg ctgagttcct ggacgtgtac aagaactgca acgggggtggt catgatgttc
480
gacattacca agcagtggac cttcaattac attctccggg agcttccaaa agtgcccacc
540
cacgtgccag tgtgcgtgct ggggaactac cgggacatgg gcgagcaccg agtcacnnc
600
tgccggacgn acgtgcgtga cttcatcgac aacctggaca gacctccagg ttcctcctac
660
ttccgctatg ctgagttctc catgaagaac agcttcggcc taaagtacct tcataagttc
720
ttcaatatcc catttttgca gcttcagagg gagacgtgtg tgcggcagct ggagacgaac
780
cagctggaca tggacgccac gctggaggag ctgtcgggtgc agcaggagac ggaggaccag
840
aactacggca tcttcctgga gatgatggag gctcgcagcc gtggccatgc gtcccactg
900
gcggccaacg ggcagagccc atccccgggc tcccagtcac cagtgggtgcc tgcaggcgct
960
gtgtccacgg ggagctccag ccccggcaca gccagcccc cccacagct gcccctcaat
1020

```

ggttgccccca ccatectc
1038

<210> 3556

<211> 333

<212> PRT

<213> Homo sapiens

<400> 3556

Met	Phe	Ser	Ala	Leu	Lys	Lys	Leu	Val	Gly	Ser	Asp	Gln	Ala	Pro	Gly
1				5					10					15	
Arg	Asp	Lys	Asn	Ile	Pro	Ala	Gly	Leu	Gln	Ser	Met	Asn	Gln	Ala	Leu
			20					25					30		
Gln	Arg	Arg	Phe	Ala	Lys	Gly	Val	Gln	Tyr	Asn	Met	Lys	Ile	Val	Ile
			35				40					45			
Arg	Gly	Asp	Arg	Asn	Thr	Gly	Lys	Thr	Ala	Leu	Trp	His	Arg	Leu	Gln
	50					55					60				
Gly	Arg	Pro	Phe	Val	Glu	Glu	Tyr	Ile	Pro	Thr	Gln	Glu	Ile	Gln	Val
65					70					75				80	
Thr	Ser	Ile	His	Trp	Ser	Tyr	Lys	Thr	Thr	Asp	Asp	Ile	Val	Lys	Val
			85						90					95	
Glu	Val	Trp	Asp	Val	Val	Asp	Lys	Gly	Lys	Cys	Lys	Lys	Arg	Gly	Asp
			100					105					110		
Gly	Leu	Lys	Met	Glu	Asn	Asp	Pro	Gln	Glu	Ala	Glu	Ser	Glu	Met	Ala
			115				120					125			
Leu	Asp	Ala	Glu	Phe	Leu	Asp	Val	Tyr	Lys	Asn	Cys	Asn	Gly	Val	Val
	130					135					140				
Met	Met	Phe	Asp	Ile	Thr	Lys	Gln	Trp	Thr	Phe	Asn	Tyr	Ile	Leu	Arg
145					150					155				160	
Glu	Leu	Pro	Lys	Val	Pro	Thr	His	Val	Pro	Val	Cys	Val	Leu	Gly	Asn
			165						170					175	
Tyr	Arg	Asp	Met	Gly	Glu	His	Arg	Val	Ile	Xaa	Cys	Arg	Thr	Xaa	Val
			180					185					190		
Arg	Asp	Phe	Ile	Asp	Asn	Leu	Asp	Arg	Pro	Pro	Gly	Ser	Ser	Tyr	Phe
			195				200					205			
Arg	Tyr	Ala	Glu	Ser	Ser	Met	Lys	Asn	Ser	Phe	Gly	Leu	Lys	Tyr	Leu
	210					215					220				
His	Lys	Phe	Phe	Asn	Ile	Pro	Phe	Leu	Gln	Leu	Gln	Arg	Glu	Thr	Leu
225					230					235				240	
Leu	Arg	Gln	Leu	Glu	Thr	Asn	Gln	Leu	Asp	Met	Asp	Ala	Thr	Leu	Glu
			245						250					255	
Glu	Leu	Ser	Val	Gln	Gln	Glu	Thr	Glu	Asp	Gln	Asn	Tyr	Gly	Ile	Phe
			260					265					270		
Leu	Glu	Met	Met	Glu	Ala	Arg	Ser	Arg	Gly	His	Ala	Ser	Pro	Leu	Ala
	275						280					285			
Ala	Asn	Gly	Gln	Ser	Pro	Ser	Pro	Gly	Ser	Gln	Ser	Pro	Val	Val	Pro
	290					295					300				
Ala	Gly	Ala	Val	Ser	Thr	Gly	Ser	Ser	Ser	Pro	Gly	Thr	Ala	Gln	Pro
305					310					315				320	
Ala	Pro	Gln	Leu	Pro	Leu	Asn	Gly	Cys	Pro	Thr	Ile	Leu			
			325						330						

<210> 3557

<211> 486

<212> DNA

<213> Homo sapiens

<400> 3557

tcagtgacaa ggaggacgtt tgggcacagc gccattgcag tgcacacgtg gtatgcatgt
60
ccggcattga tcaagtccat ctgggctatg gccataagcc aacaccagtt ctatctggac
120
agaaaagcaga gtaagtccaa aatccatgca gcacgcagcc tgagtgcgat cgccatcgac
180
ctgaccgaga cggggacgct gaagacctcg aagctggcca acatgggttag caaggggaag
240
atcatcagcg gcagcagcgg cagcctgctg tcttcaggat ctgggtgccag gagacactgc
300
attctactcc caggttctca ggaatcagat agctcgagc cgccaagaa ggacatgctg
360
gctgccttga agtccaggca ggaagctctg gaggaacccc tgcgtcagag gctggaggaa
420
ctgaagaagc tgtgtctccg agaagctgag ctcacgggca agctgccagt agaatatccc
480
ctggat
486

<210> 3558

<211> 162

<212> PRT

<213> Homo sapiens

<400> 3558

Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His	Thr
1				5					10					15	
Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala	Ile
			20					25					30		
Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys	Ile
		35					40					45			
His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu	Thr
	50					55					60				
Gly	Thr	Leu	Lys	Thr	Ser	Lys	Leu	Ala	Asn	Met	Gly	Ser	Lys	Gly	Lys
65					70					75				80	
Ile	Ile	Ser	Gly	Ser	Ser	Gly	Ser	Leu	Leu	Ser	Ser	Gly	Ser	Gly	Ala
			85					90					95		
Arg	Arg	His	Cys	Ile	Leu	Leu	Pro	Gly	Ser	Gln	Glu	Ser	Asp	Ser	Ser
			100					105					110		
Gln	Ser	Ala	Lys	Lys	Asp	Met	Leu	Ala	Ala	Leu	Lys	Ser	Arg	Gln	Glu
		115					120					125			
Ala	Leu	Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu
	130					135					140				
Cys	Leu	Arg	Glu	Ala	Glu	Leu	Thr	Gly	Lys	Leu	Pro	Val	Glu	Tyr	Pro
145					150					155				160	
Leu	Asp														

<210> 3559

<211> 673

<212> DNA

<213> Homo sapiens

<400> 3559

gaaggagcga gcgggggcgc gaggcgttta cctggaggca gcggcttggg cgcgcagagc
 60
 ggccgcggct ccccgccacc tgcggccatg gatgaggagc gcgccctcta catcgccgg
 120
 gccggcgaag caggggctat cgagcgggtc ctgagggatt acagcgacaa gcatagggtc
 180
 actttcaaat ttgaatcaac agatgaagat aaaagaaaga aactctgtga aggcataatt
 240
 aaagtcctta taaaggacat cccaacaaca tgtcaagtgt cctgcctgga agtactccgc
 300
 attctctcca gagacaaaaa ggttttagtt cctgtgacaa ctaaggaaaa tatgcagata
 360
 ctgctgcgac tagccaagct aaatgagtta gatgattctt tggagaaagt atcagagttc
 420
 ccagttattg tggagtcatt aaaatgtctg tgtaatatag tgttcaacag tcagatggca
 480
 cagcagctca gcctggaact taatcttgct gcaaagctct gtaacctcct gagaaagtgc
 540
 aaggaccgga aatttatcaa tgacattaag tgctttgact tgcgcttgct cttccttctg
 600
 tcacttttgc acaccgacat caggtcacaa ttgcgctatg agtccaggg actaccgctg
 660
 ctaacgcaga tcg
 673

<210> 3560

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3560

Met Asp Glu Glu Arg Ala Leu Tyr Ile Val Arg Ala Gly Glu Ala Gly
 1 5 10 15
 Ala Ile Glu Arg Val Leu Arg Asp Tyr Ser Asp Lys His Arg Ala Thr
 20 25 30
 Phe Lys Phe Glu Ser Thr Asp Glu Asp Lys Arg Lys Lys Leu Cys Glu
 35 40 45
 Gly Ile Phe Lys Val Leu Ile Lys Asp Ile Pro Thr Thr Cys Gln Val
 50 55 60
 Ser Cys Leu Glu Val Leu Arg Ile Leu Ser Arg Asp Lys Lys Val Leu
 65 70 75 80
 Val Pro Val Thr Thr Lys Glu Asn Met Gln Ile Leu Leu Arg Leu Ala
 85 90 95
 Lys Leu Asn Glu Leu Asp Asp Ser Leu Glu Lys Val Ser Glu Phe Pro
 100 105 110
 Val Ile Val Glu Ser Leu Lys Cys Leu Cys Asn Ile Val Phe Asn Ser
 115 120 125
 Gln Met Ala Gln Gln Leu Ser Leu Glu Leu Asn Leu Ala Ala Lys Leu
 130 135 140
 Cys Asn Leu Leu Arg Lys Cys Lys Asp Arg Lys Phe Ile Asn Asp Ile

145 150 155 160
 Lys Cys Phe Asp Leu Arg Leu Leu Phe Leu Leu Ser Leu Leu His Thr
 165 170 175
 Asp Ile Arg Ser Gln Leu Arg Tyr Glu Leu Gln Gly Leu Pro Leu Leu
 180 185 190
 Thr Gln Ile
 195

<210> 3561

<211> 523

<212> DNA

<213> Homo sapiens

<400> 3561

acgcgtgcct gtaggcagac gaggggccag tgggcagagc agacatgaat gccccctgaa
 60
 ggctcacaga gctgactcag aagggccatt gtcacacact ggtaagagct gattctgagg
 120
 ggagggcatg agacgcctat tgcagagctg ctcaccagaa ggtcacagga atttagaaga
 180
 gaagctccta cctgcccccg atcatgcacg tggccactga ggatgccaga cgagggtgatg
 240
 ctgggtctcat agagaatgta cccgaaggac tgtccatttc cccattgac tggcaggttc
 300
 tccatgttga tgggcttttc agacttgatt ggctgcgtac agaagagatg gaggggtggg
 360
 caggctcagg aggagtgggg tcacagacag actctgcttg ggggctggca catgggggtg
 420
 aagcggaggt ttgggtgggtg ttttctactt tgacttctca ttgcactaaa catacaactc
 480
 tccaggggtga cggggaagag gagtggggca aaggggtgtg cac
 523

<210> 3562

<211> 106

<212> PRT

<213> Homo sapiens

<400> 3562

Met His Val Ala Thr Glu Asp Ala Arg Arg Gly Asp Ala Gly Leu Ile
 1 5 10 15
 Glu Asn Val Pro Glu Gly Leu Ser Ile Ser Pro Ile Asp Trp Gln Val
 20 25 30
 Leu His Val Asp Gly Leu Phe Arg Leu Asp Trp Leu Arg Thr Glu Glu
 35 40 45
 Met Glu Gly Trp Ala Gly Ser Gly Gly Val Gly Ser Gln Thr Asp Ser
 50 55 60
 Ala Trp Gly Leu Ala His Gly Val Glu Ala Glu Val Trp Trp Val Phe
 65 70 75 80
 Ser Thr Leu Thr Ser His Cys Thr Lys His Thr Thr Leu Gln Gly Asp
 85 90 95
 Gly Glu Glu Glu Trp Gly Lys Gly Val Cys
 100 105

<210> 3563
 <211> 359
 <212> DNA
 <213> Homo sapiens

<400> 3563
 nnacgcgtag tcgaactgcc cgcgctcgag cgcctccttg tggtcggtcc ccgtccgggt
 60
 cgaagccagg ggcgcgcggc gatgtgagcc atgagcgcga cgtggacgct gtccgccggag
 120
 cccctgccgc cgtcgacggg gccccagtg ggcgcgggccc tggacgcgga gcagcgcacg
 180
 gtgttcgcct tcgtgctctg cctgctcgtg gtgctggtgc tgttgatggt gcgctgcgtg
 240
 cgcctcctgc tcgaccctca cagccgcatg cccgcctcgt cctggaccga ccacaaggag
 300
 gcgctcgagc gcgggcagtt cgactacgcg ttggtgtgag ggcgcggcg cccctagg
 359

<210> 3564
 <211> 82
 <212> PRT
 <213> Homo sapiens

<400> 3564
 Met Ser Ala Thr Trp Thr Leu Ser Pro Glu Pro Leu Pro Pro Ser Thr
 1 5 10 15
 Gly Pro Pro Val Gly Ala Gly Leu Asp Ala Glu Gln Arg Thr Val Phe
 20 25 30
 Ala Phe Val Leu Cys Leu Leu Val Val Leu Val Leu Leu Met Val Arg
 35 40 45
 Cys Val Arg Ile Leu Leu Asp Pro Tyr Ser Arg Met Pro Ala Ser Ser
 50 55 60
 Trp Thr Asp His Lys Glu Ala Leu Glu Arg Gly Gln Phe Asp Tyr Ala
 65 70 75 80
 Leu Val

<210> 3565
 <211> 580
 <212> DNA
 <213> Homo sapiens

<400> 3565
 acgcgtcgtg ggtgggaaaa gggatgccag gacaccagaa gagcaataca aaacagctcc
 60
 cgtgagcagg cacaggagac ctcccgccc gccggccggg cgaccccgca ggaagtagga
 120
 aggacgagcg cgcacttcaa gtcccagaag cccccgtttc ctggagcccg cgccgtgccg
 180
 cgctacgccc gccgggagcc gggcagagcg gccaagatgt cgagcccaa gaaaagaaa
 240
 cttgagtcgg ggggcggcgc cgaaggaggg gaggggaactg aagaggaaga tggcgcggag
 300

cgggaggcgg ccctggagcg accccggacg actaagcggg aacgggacca gctgtactac
 360
 gagtgctact cggacgtttc ggtccacgag gagatgatcg cggaccgcgt ccgcaccgat
 420
 gcctaccgct gggtttccct tcggaactgg gcagcactgc gaggcaagac ggtactggac
 480
 gtgggcgcgg gcaccggcat tctgagcatc ttctgtgcc aggccggggc ccggcgcgtg
 540
 tacgcggtag aggccagcgc catctggcaa caggcccggg
 580

<210> 3566
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 3566
 Thr Arg Arg Gly Trp Glu Lys Gly Cys Gln Asp Thr Arg Arg Ala Ile
 1 5 10 15
 Gln Asn Ser Ser Arg Glu Gln Ala Gln Glu Thr Phe Arg Ala Ala Gly
 20 25 30
 Arg Ala Thr Pro Gln Glu Val Gly Arg Thr Ser Ala His Phe Lys Ser
 35 40 45
 Gln Lys Pro Pro Phe Pro Gly Ala Arg Ala Val Pro Arg Tyr Ala Arg
 50 55 60
 Arg Glu Pro Gly Arg Ala Ala Lys Met Ser Gln Pro Lys Lys Arg Lys
 65 70 75 80
 Leu Glu Ser Gly Gly Gly Ala Glu Gly Gly Glu Gly Thr Glu Glu Glu
 85 90 95
 Asp Gly Ala Glu Arg Glu Ala Ala Leu Glu Arg Pro Arg Thr Thr Lys
 100 105 110
 Arg Glu Arg Asp Gln Leu Tyr Tyr Glu Cys Tyr Ser Asp Val Ser Val
 115 120 125
 His Glu Glu Met Ile Ala Asp Arg Val Arg Thr Asp Ala Tyr Arg Trp
 130 135 140
 Val Ser Leu Arg Asn Trp Ala Ala Leu Arg Gly Lys Thr Val Leu Asp
 145 150 155 160
 Val Gly Ala Gly Thr Gly Ile Leu Ser Ile Phe Cys Ala Gln Ala Gly
 165 170 175
 Ala Arg Arg Val Tyr Ala Val Glu Ala Ser Ala Ile Trp Gln Gln Ala
 180 185 190
 Arg

<210> 3567
 <211> 2811
 <212> DNA
 <213> Homo sapiens

<400> 3567
 nngaagccga gctccgcgcc cagcaggaag aagaaacgag gaagcagcaa gaactcgaag
 60
 ccttgacagaa gagccagaag gaagctgaac tgacccgtga actggagaaa cagaaggaaa
 120

ataagcaggt ggaagagatc ctccgtctgg agaaagaaat cgaggacctg cagcgcatga
180
aggagcagca ggagctgtcg ctgaccgagg cttccctgca gaagctgcag gagcggcggg
240
accaggagct cgcaggctg gaggaggaga tttttgcacc tgaaaaaggc agccatagtt
300
ttccagaagc aactcagagg tcagattgct cggagagttt acagacaatt gctggcagag
360
aaaagggagc aagaagaaaa gaagaaacag gaagaggaag aaaagaagaa acgggaggaa
420
gaagaaagag aaagagagag agagcgaaga gaagccgagc tccgcgcccc gcaggaagaa
480
gaaacgagga agcagcaaga actcgaagcc ttgcagaaga gccagaagga agctgaactg
540
accgtgaac tggagaaaca gaaggaat aagcaggtgg aagagatcct ccgtctggag
600
aaagaaatcg aggacctgca gcgcatgaag gagcagcagg agctgtcgct gaccgaggct
660
tccctgcaga agctgcagga gcggcgggac caggagctcc gcaggctgga ggaggaagcg
720
tgcaggcggg ccaggagtt cctcgagtcc ctcaatttcg acgagatcga cgagtgtgtc
780
cggaatatcg agcggtcctt gtcgggggga agcgaatttt ccagcgagct ggctgagagc
840
gcatcgagg agaagcccaa cttcaacttc agccagcctt acccagagga ggaggtcgat
900
gagggtctcg aagccgacga cgacgccttc aaggactccc ccaacccag cgagcacggc
960
cactcagacc agcgaacaag tggcatccgg accagcgatg actcttcaga ggaggacca
1020
tacatgaacg acacggtggt gcccaccagc cccagtgcgg acagcacggt gctgctcgcc
1080
ccatcagtgc aggactccgg gagcctacac aactcctcca gcggcgagtc cactactg
1140
atgccccaga acgctgggga cttgccctcc ccagacggcg actacgacta cgaccaggat
1200
gactatgagg acggtgccat cacttcgggc agcagcgtga ccttctccaa ctctacggc
1260
agccagtggg ccccgacta ccgctgctct gtggggacct acaacagctc ggggtgcctac
1320
cggttcagct ctgagggggc gcagtcctcg tttgaagata gtgaagagga ctttgattcc
1380
aggtttgata cagatgatga gctttcatat cggcgtgact ctgtgtacag ctgtgtcact
1440
ctgccgtatt tccacagctt tctgtacatg aaaggtggcc tgatgaactc ttggaaacgc
1500
cgctggtgag tcctcaagga tgaaaccttc ttgtggttcc gctccaagca ggaggccctc
1560
aagcaaggct ggctccacaa aaaagggggg ggctcctcca cgctgtccag gagaaattgg
1620
aagaagcgct ggtttgcct ccgccagtc aagctgatgt actttgaaaa cgacagcgag
1680
gagaagctca agggcaccgt agaagtgcga acggcaaaa agatcataga taacaccacc
1740

aaggagaatg ggatcgacat cattatggcc gataggactt tccacctgat tgcagagtcc
1800
ccagaagatg ccagccagtg gttcagcgtg ctgagtcagg tccacgcgtc cacggaccag
1860
gagatccagg agatgcatga tgagcaggca aaccacaga atgctgtggg caccttggat
1920
gtggggctga ttgattctgt gtgtgcctct gacagccctg atagaccaa ctcgtttctg
1980
atcatcacgg ccaaccgggt gctgcactgc aacgccgaca cgccggagga gatgcaccac
2040
tggataaacc tgctgcagag gtccaaaggg gacaccagag tggagggcca ggaattcatc
2100
gtgagaggat ggttgacaa agaggtgaag aacagtccaa agatgtcttc actgaaactg
2160
aagaaacggg ggtttgtact caccacaat tccctggatt actacaagag ttcagagaag
2220
aacgcgctca aactggggac cctggctctc aacagcctct gctctgtcgt cccccagat
2280
gagaagatat tcaaagagac aggtacttgg aacgtcaccg tgtacgggcg caagcactgt
2340
taccggctct acaccaagct gctcaacgag gccaccgggt ggtccagtgt cagtcaaac
2400
gtgactgaca ccaaggcccc gatcgacacc cccaccagc agctgattca agatatcaag
2460
gagaactgcc tgaactcgga tgtggtggaa cagatttaca agcggaaccc gatccttcga
2520
tacaccatc accccttgca ctcccactc ctgccccttc cgtatgggga cataaatctc
2580
aacttgctca aagacaaagg ctataccacc cttcaggatg aggccatcaa gatattcaat
2640
tccctgcagc aactggagtc catgtctgac ccaattccaa taatccaggg catcctacag
2700
acagggcatg acctgcgacc tctgctggac gagctgtact gccagcttat caaacagacc
2760
aacaaagtgc cccaccccg cagtgtgggc aacctgtaca gctggcagat c
2811

<210> 3568

<211> 869

<212> PRT

<213> Homo sapiens

<400> 3568

Pro Arg Leu Pro Cys Arg Ser Cys Arg Ser Gly Gly Thr Arg Ser Ser
1 5 10 15
Ala Gly Trp Arg Arg Arg Phe Leu His Leu Lys Lys Ala Ala Ile Val
20 25 30
Phe Gln Lys Gln Leu Arg Gly Gln Ile Ala Arg Arg Val Tyr Arg Gln
35 40 45
Leu Leu Ala Glu Lys Arg Glu Gln Glu Glu Lys Lys Lys Gln Glu Glu
50 55 60
Glu Glu Lys Lys Lys Arg Glu Glu Glu Glu Arg Glu Arg Glu Arg Glu
65 70 75 80
Arg Arg Glu Ala Glu Leu Arg Ala Gln Gln Glu Glu Glu Thr Arg Lys

2726

515 520 525
 Ile Ala Glu Ser Pro Glu Asp Ala Ser Gln Trp Phe Ser Val Leu Ser
 530 535 540
 Gln Val His Ala Ser Thr Asp Gln Glu Ile Gln Glu Met His Asp Glu
 545 550 555 560
 Gln Ala Asn Pro Gln Asn Ala Val Gly Thr Leu Asp Val Gly Leu Ile
 565 570 575
 Asp Ser Val Cys Ala Ser Asp Ser Pro Asp Arg Pro Asn Ser Phe Val
 580 585 590
 Ile Ile Thr Ala Asn Arg Val Leu His Cys Asn Ala Asp Thr Pro Glu
 595 600 605
 Glu Met His His Trp Ile Thr Leu Leu Gln Arg Ser Lys Gly Asp Thr
 610 615 620
 Arg Val Glu Gly Gln Glu Phe Ile Val Arg Gly Trp Leu His Lys Glu
 625 630 635 640
 Val Lys Asn Ser Pro Lys Met Ser Ser Leu Lys Leu Lys Lys Arg Trp
 645 650 655
 Phe Val Leu Thr His Asn Ser Leu Asp Tyr Tyr Lys Ser Ser Glu Lys
 660 665 670
 Asn Ala Leu Lys Leu Gly Thr Leu Val Leu Asn Ser Leu Cys Ser Val
 675 680 685
 Val Pro Pro Asp Glu Lys Ile Phe Lys Glu Thr Gly Tyr Trp Asn Val
 690 695 700
 Thr Val Tyr Gly Arg Lys His Cys Tyr Arg Leu Tyr Thr Lys Leu Leu
 705 710 715 720
 Asn Glu Ala Thr Arg Trp Ser Ser Val Ser Gln Asn Val Thr Asp Thr
 725 730 735
 Lys Ala Pro Ile Asp Thr Pro Thr Gln Gln Leu Ile Gln Asp Ile Lys
 740 745 750
 Glu Asn Cys Leu Asn Ser Asp Val Val Glu Gln Ile Tyr Lys Arg Asn
 755 760 765
 Pro Ile Leu Arg Tyr Thr His His Pro Leu His Ser Pro Leu Leu Pro
 770 775 780
 Leu Pro Tyr Gly Asp Ile Asn Leu Asn Leu Leu Lys Asp Lys Gly Tyr
 785 790 795 800
 Thr Thr Leu Gln Asp Glu Ala Ile Lys Ile Phe Asn Ser Leu Gln Gln
 805 810 815
 Leu Glu Ser Met Ser Asp Pro Ile Pro Ile Ile Gln Gly Ile Leu Gln
 820 825 830
 Thr Gly His Asp Leu Arg Pro Leu Arg Asp Glu Leu Tyr Cys Gln Leu
 835 840 845
 Ile Lys Gln Thr Asn Lys Val Pro His Pro Gly Ser Val Gly Asn Leu
 850 855 860
 Tyr Ser Trp Gln Ile
 865

<210> 3569

<211> 5070

<212> DNA

<213> Homo sapiens

<400> 3569

tctgaatccc cccccagcac cctcaatgcc cagatgctga atggaatgat caaacaggag

60

cctgggaccg tgacagccct gcctctgcac cccactcgag ccccatcgcc accctggcct
120
ccccagggtc cgctctcccc gggccctggc tccttgccct tcagcattgc ccgtgtccag
180
acaccgcctt ggcacccgcc aggtgcccc tccccaggcc tectgcagga cagtgcagc
240
ctcagtggct cctacctgga ccccaactac cagtccatca agtggcagcc tcatcagcag
300
aacaagtggg cgaccctgta cgatgctaac tacaaggagc tgcccatgct cacctaccgc
360
gtggatgcgg acaagggcct caacttttcg gtgggcgacg acgcctttgt gtgccagaag
420
aagaaccact tccaggtgac agtgtacatc ggcagtctgg gcgagcccaa gtacgtcaag
480
acgcccgagg gcctcaagcc cctcgactgc ttctatctga agctgcacgg agtgaagctg
540
gaggccctga accagtcctat taacatcgag cagtcccagt cagaccggag caagcggccc
600
ttcaaccggg tcacgggtcaa tctgccccct gagcaggtca cgaaggtgac tgtggggcgg
660
ctgcacttca gcgagaccac cgctaacaac atgcgtaaga agggcaagcc caaccgggac
720
cagaggtact tcatgctggg ggtggccctc caggctcatg cacagaacca gaactacag
780
ctggccgccc agatctcaga gcgcatcatt gtgcgggccc ccaaccagg ccagttcgag
840
agcgacagcg atgtgttgtg gcagcgggca cagggtgccc acaccgtctt ccaccacggc
900
cgcggtgggca tcaacacaga ccggccggat gaggcgctgg ttgtgcacgg gaatgtcaag
960
gtcatgggct cgcttatgca cccctccgac ctgcgcgcca aggaacacgt gcaggagggtg
1020
gacaccaccg agcaattgaa gaggatctcg cgcattgcggc tgggtgacta cagatacaag
1080
cccaggttcg ccgccagcgc gggcatcgag gccaccgcgc cagagacagg tgtcatcgct
1140
caggaggtga aggagatctt gcctgaggct gtgaaagaca ccggagacat ggtctttgcc
1200
aatgggaaaa ccatagagaa ctccctgggt gtgaacaagg agcgcatctt catggagaac
1260
gtagggggcg tgaaggagct gtgcaagctg acagacaacc tggagacgcg cattgatgag
1320
ctggagcgct ggagccacaa gctggccaag ctgcggcggc tcgacagcct caagtccacc
1380
ggcagctcgg gcgccttcag ccatgcaggg agccagttca gtcgggcggg cagcgtcccc
1440
cacaagaaga ggcccccaa ggtggccagc aagtcacgt ccgtgggtcc ggaccaggcc
1500
tgcatcagcc agcgcttctt gcagggaacc atcattgccc tgggtggtggt catggccttc
1560
agcgtggtgt ccatgtccac actgtacgtg ctgagcctgc gcacagagga ggacctggtg
1620
gacactgatg gctcttttgc cgtgtccact tcctgtctcc tggccctgct ccggccccag
1680

ccccctgggg ggagtgaggc cttgtgcccc tggteccagcc agagcttttg gaccacgcag
1740
ctccgacagt ccccttgac cacgggggcta ccaggcatac agccctcttt gctgctggtg
1800
accaccagcc tcaccagctc ggccccaggt tctgctgtcc gcaccttga catgtgttcc
1860
agccaccctt gccctgtcat ctgtgttcc tcaccacta ccaacctac cactggctct
1920
agtcttgcc ccagctttaa ccctggccat gttctcagcc caagtccag cccagcacc
1980
aaccgctcag gccccagcca gatggccctt ctgccagtca ccaacatcag agccaagtcc
2040
tggggtcttt cagtcaatgg cattgaccac tccaagcatc acaagagtct ggagcctctg
2100
gccagccctg cagtccctt ccctgggggg cagggcaaag ccaagaacag tcccagcctt
2160
ggtttccatg gccgggccc cagaggggcc ctccagtcca gcgtgggccc tgctgagccc
2220
acctgggccc agggccagtc agcctctctc cttgcagagc cagtgcctc cctgacctc
2280
atccagggtg tggagaattc gatgtccatc acctccagc actgtgtctc aggggatgcc
2340
tgcaggcctg ggaacttcac ctaccatc cctgtcagca gtggcaccac actgcacctc
2400
agcctgactc tgcagatgaa ctctctctc cccgtgtctg tgggtgtgtg cagcctgagg
2460
tcaaaggagg aacctgtga ggaggggagc cttccacaga gtctccacac ccaccaggac
2520
acctcaggga cctctcaccg gtggccaata accatcctgt ccttcctgga attcacctac
2580
cacttcgggg tggcactgct gggtcaggcc aactgcagtt cagaggctct cggccagcca
2640
gccacagact accacttcca cttctaccgc ctgtgtgact gagctgccct cctgaggcag
2700
caccacacca gggaccaggg gtgcccaggc acccccaac actggatgca atggtgttac
2760
actggagccc gctgcaggcc agctctgctg ttcactggcc ctacccgaga ctggtgaaac
2820
tggaagtctt cacactggag ttgctgttcc agctggtcgc cctcacggc acagaggga
2880
cctgagagcc agagacttct tgggccttcc tgctgccac cccctagggg ccaggacagg
2940
accagtttac ctctttccag atatggtggt tggagggtg gttcaggtgc cctggaggga
3000
aggggaagcc tgtggccctg atttgttcag agccattct cccttgctc cccttttgag
3060
actggagcca acccttttg agagaggacc tgccacctt tgagatcagc agggggctcg
3120
gatccagccc taagagactt gggtggaacc ccatgagtca atggaggga gacggctctc
3180
cccttaaag ctgttccctg ggggatggct tggtagtgga cttctgggg tttgctgtt
3240
acgccagact cggacttcta agctttaagt gtggccagg aggtttcttc tccctgggag
3300

ggcttggtc ccaagaagtc ccagggcagc cgaggccagc cctgcctggg ttggagaaac
 3360
 tgaatttgg ccttaagtct actcagtgcc tggagaagcc accctcagcc cttcacaggc
 3420
 ctgaaccagt aggggccagt gggccaggta agccctagag ccttgaacca ggaatatcca
 3480
 ggaagaggaa attccctttg agccccaga tggatttgca gcttcactgc ctgcgttcct
 3540
 gggagcgtct ggagctcaca gtgatcagtg accacatcat tctctctgag cagaggagca
 3600
 ggaatccctc aagcagcagc ctgggtcttg ctgggtggga gatgcaaata gcttttgctg
 3660
 ttattaatga agtaattact aaatgcactt aaaccagggc aggaaggaat ggaaggatgg
 3720
 agctagaaag ctgagagtgg gccagagcag ggggtgtgaca cttgcaaaga cagggtctctg
 3780
 actctgatcc ctcccaggga gcctccgaca cccatccac tcccaaccac caagacctg
 3840
 ggtagaggaa gaagtgtgat cttaagtgcc accttcaagt ttcttagtgg tgcttggtgc
 3900
 attccgaggc tacatccagg ctcatggaag gagtgtagta ttcatttagc catgtctgcc
 3960
 atgggtccag aaatgggaaa ggaattgct gtcttggccc tgtggtatgc tgccacctct
 4020
 ttgggaagca ggccttgccc ctgtcccacc actcattctc agctttgaat gggaggcctt
 4080
 tctatagtgg aggcctttcc ttgaagccta tgaactgcag gcccccttt gccattgatc
 4140
 tcaaagcact tgtcctcagg atagggaaga gcagggggat gcaggaatag cagggatagc
 4200
 ttgctcccag cccctcccc aatttggttc cgttgacata ggaattttac gattcccaaa
 4260
 ccatgcaggg gctgagcctt ccttatgatg actttgttct cctcccact gggggaatcc
 4320
 tccctatgcc ttaaaactgc cgagccccac tccatgtaat aggattcctg ggcttccca
 4380
 atgttcttgg actgcgggcc ctgagtcctt aactggaaag tgaccgtcca 4440
 ctgcccctag gagcccatct ggacacagca cagccccaaa accgttagca gctggctctg
 4500
 tttccaagcc tggggagggg ttctcagtg caggagtggg ggacaggctg gggatccaag
 4560
 ctgcttgagg gggtaacct tggaccaaag ttgccttaag cctgtggtaa aagggttca
 4620
 gggaaggtaa gtgggccacc tgcgtgaagc tgccagctgc ccggctggca atgggtgag
 4680
 tgtcttgccc ctgtccctgc cctgggtgcc agcaggatcat cctcccttc ttctctctcc
 4740
 tttggcgttt gtctctgtag tcaactgggt aatctcccc tagcttcaag ctgtacatag
 4800
 ggctcccag tgcaaatcct cctgcccata ccgtgcaccc ttagaagcct gcgtgtgcat
 4860
 agagcgcccc ctacttccca gttaactccc agttcttctc cctgagcttg gtatttgta
 4920
 tgtgccaaact ctgactctga ggtgggcagt gaggggaagca gccccgggcc tgcttgcttc
 4980

ctgtccccga aatgttcggt tcttctgaag taaatatata tatataaata aatgtataaa
 5040
 tactgctttg tatctgaaaa aaaaaaaaaa
 5070 .

<210> 3570

<211> 893

<212> PRT

<213> Homo sapiens

<400> 3570

Ser	Glu	Ser	Pro	Pro	Ser	Thr	Leu	Asn	Ala	Gln	Met	Leu	Asn	Gly	Met
1				5					10					15	
Ile	Lys	Gln	Glu	Pro	Gly	Thr	Val	Thr	Ala	Leu	Pro	Leu	His	Pro	Thr
		20						25					30		
Arg	Ala	Pro	Ser	Pro	Pro	Trp	Pro	Pro	Gln	Gly	Pro	Leu	Ser	Pro	Gly
		35					40					45			
Pro	Gly	Ser	Leu	Pro	Leu	Ser	Ile	Ala	Arg	Val	Gln	Thr	Pro	Pro	Trp
		50				55					60				
His	Pro	Pro	Gly	Ala	Pro	Ser	Pro	Gly	Leu	Leu	Gln	Asp	Ser	Asp	Ser
65				70					75					80	
Leu	Ser	Gly	Ser	Tyr	Leu	Asp	Pro	Asn	Tyr	Gln	Ser	Ile	Lys	Trp	Gln
			85					90					95		
Pro	His	Gln	Gln	Asn	Lys	Trp	Ala	Thr	Leu	Tyr	Asp	Ala	Asn	Tyr	Lys
		100					105					110			
Glu	Leu	Pro	Met	Leu	Thr	Tyr	Arg	Val	Asp	Ala	Asp	Lys	Gly	Phe	Asn
		115					120					125			
Phe	Ser	Val	Gly	Asp	Asp	Ala	Phe	Val	Cys	Gln	Lys	Lys	Asn	His	Phe
		130			135						140				
Gln	Val	Thr	Val	Tyr	Ile	Gly	Met	Leu	Gly	Glu	Pro	Lys	Tyr	Val	Lys
145				150					155					160	
Thr	Pro	Glu	Gly	Leu	Lys	Pro	Leu	Asp	Cys	Phe	Tyr	Leu	Lys	Leu	His
			165					170					175		
Gly	Val	Lys	Leu	Glu	Ala	Leu	Asn	Gln	Ser	Ile	Asn	Ile	Glu	Gln	Ser
		180					185					190			
Gln	Ser	Asp	Arg	Ser	Lys	Arg	Pro	Phe	Asn	Pro	Val	Thr	Val	Asn	Leu
		195					200					205			
Pro	Pro	Glu	Gln	Val	Thr	Lys	Val	Thr	Val	Gly	Arg	Leu	His	Phe	Ser
		210			215						220				
Glu	Thr	Thr	Ala	Asn	Asn	Met	Arg	Lys	Lys	Gly	Lys	Pro	Asn	Pro	Asp
225				230						235				240	
Gln	Arg	Tyr	Phe	Met	Leu	Val	Val	Ala	Leu	Gln	Ala	His	Ala	Gln	Asn
			245					250					255		
Gln	Asn	Tyr	Thr	Leu	Ala	Ala	Gln	Ile	Ser	Glu	Arg	Ile	Ile	Val	Arg
		260					265					270			
Ala	Ser	Asn	Pro	Gly	Gln	Phe	Glu	Ser	Asp	Ser	Asp	Val	Leu	Trp	Gln
		275					280					285			
Arg	Ala	Gln	Val	Pro	Asp	Thr	Val	Phe	His	His	Gly	Arg	Val	Gly	Ile
		290			295						300				
Asn	Thr	Asp	Arg	Pro	Asp	Glu	Ala	Leu	Val	Val	His	Gly	Asn	Val	Lys
305				310						315				320	
Val	Met	Gly	Ser	Leu	Met	His	Pro	Ser	Asp	Leu	Arg	Ala	Lys	Glu	His
			325					330					335		
Val	Gln	Glu	Val	Asp	Thr	Thr	Glu	Gln	Leu	Lys	Arg	Ile	Ser	Arg	Met

			340								345								350				
Arg	Leu	Val	His	Tyr	Arg	Tyr	Lys	Pro	Glu	Phe	Ala	Ala	Ser	Ala	Gly								
		355					360					365											
Ile	Glu	Ala	Thr	Ala	Pro	Glu	Thr	Gly	Val	Ile	Ala	Gln	Glu	Val	Lys								
	370					375					380												
Glu	Ile	Leu	Pro	Glu	Ala	Val	Lys	Asp	Thr	Gly	Asp	Met	Val	Phe	Ala								
385					390					395					400								
Asn	Gly	Lys	Thr	Ile	Glu	Asn	Phe	Leu	Val	Val	Asn	Lys	Glu	Arg	Ile								
				405					410					415									
Phe	Met	Glu	Asn	Val	Gly	Ala	Val	Lys	Glu	Leu	Cys	Lys	Leu	Thr	Asp								
			420					425					430										
Asn	Leu	Glu	Thr	Arg	Ile	Asp	Glu	Leu	Glu	Arg	Trp	Ser	His	Lys	Leu								
	435						440					445											
Ala	Lys	Leu	Arg	Arg	Leu	Asp	Ser	Leu	Lys	Ser	Thr	Gly	Ser	Ser	Gly								
	450					455					460												
Ala	Phe	Ser	His	Ala	Gly	Ser	Gln	Phe	Ser	Arg	Ala	Gly	Ser	Val	Pro								
465					470					475					480								
His	Lys	Lys	Arg	Pro	Pro	Lys	Val	Ala	Ser	Lys	Ser	Ser	Ser	Val	Val								
				485					490					495									
Pro	Asp	Gln	Ala	Cys	Ile	Ser	Gln	Arg	Phe	Leu	Gln	Gly	Thr	Ile	Ile								
			500					505					510										
Ala	Leu	Val	Val	Val	Met	Ala	Phe	Ser	Val	Val	Ser	Met	Ser	Thr	Leu								
	515						520					525											
Tyr	Val	Leu	Ser	Leu	Arg	Thr	Glu	Glu	Asp	Leu	Val	Asp	Thr	Asp	Gly								
	530					535					540												
Ser	Phe	Ala	Val	Ser	Thr	Ser	Cys	Leu	Leu	Ala	Leu	Leu	Arg	Pro	Gln								
545					550					555				560									
Pro	Pro	Gly	Gly	Ser	Glu	Ala	Leu	Cys	Pro	Trp	Ser	Ser	Gln	Ser	Phe								
				565					570				575										
Gly	Thr	Thr	Gln	Leu	Arg	Gln	Ser	Pro	Leu	Thr	Thr	Gly	Leu	Pro	Gly								
			580					585				590											
Ile	Gln	Pro	Ser	Leu	Leu	Leu	Val	Thr	Thr	Ser	Leu	Thr	Ser	Ser	Ala								
	595						600					605											
Pro	Gly	Ser	Ala	Val	Arg	Thr	Leu	Asp	Met	Cys	Ser	Ser	His	Pro	Cys								
	610					615					620												
Pro	Val	Ile	Cys	Cys	Ser	Ser	Pro	Thr	Thr	Asn	Pro	Thr	Thr	Gly	Pro								
625					630					635				640									

```

      770              775              780
Asn Phe Thr Tyr His Ile Pro Val Ser Ser Gly Thr Pro Leu His Leu
785              790              795              800
Ser Leu Thr Leu Gln Met Asn Ser Ser Ser Pro Val Ser Val Val Leu
      805              810              815
Cys Ser Leu Arg Ser Lys Glu Glu Pro Cys Glu Glu Gly Ser Leu Pro
      820              825              830
Gln Ser Leu His Thr His Gln Asp Thr Gln Gly Thr Ser His Arg Trp
      835              840              845
Pro Ile Thr Ile Leu Ser Phe Arg Glu Phe Thr Tyr His Phe Arg Val
      850              855              860
Ala Leu Leu Gly Gln Ala Asn Cys Ser Ser Glu Ala Leu Ala Gln Pro
865              870              875              880
Ala Thr Asp Tyr His Phe His Phe Tyr Arg Leu Cys Asp
      885              890

```

<210> 3571

<211> 528

<212> DNA

<213> Homo sapiens

<400> 3571

```

acgcgtcccc tgtccggctt ggtatgggtc gcgctgctag cgctaggcca cgccttcctg
60
ttcacccggg gcgtggtgag cgcctgggac caggtgtcct attttctctt cgtcatcttc
120
acggcgctatg ccatgctgcc cttgggcatg cgggacgccg ccgtcgcggg cctcgctccc
180
tcactctcgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctacaggcct
240
gcactgctgc cgcaggtgag cacgcaagta gcacaggctg cgctcaggac ggctctgcca
300
cgtgctagta ggctcctttt aggggggttg tgagctgtga ctccaaggca aggtgcaacg
360
ctgggcgcag gatacccaac cgtgctttcg cagagctggt acaacagtgt gatgcaatgc
420
ctgctgttac cagaagaggg atccaggcca cacggaaggg agtcgtgtcg tggtttaccc
480
cggggacaac agatgtggtt aatgaaacct tgacagagaa tgaaaaaa
528

```

<210> 3572

<211> 110

<212> PRT

<213> Homo sapiens

<400> 3572

```

Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
1              5              10              15
His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
      20              25              30
Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
      35              40              45
Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His

```

50		55		60
Leu Leu Val Leu Gly	Leu Tyr Leu Gly Pro Gln	Pro Asp Ser Arg Pro		
65	70	75	80	
Ala Leu Leu Pro Gln Val Ser Thr Gln Val Ala Gln Ala Ala Leu Arg				
	85	90	95	
Thr Ala Leu Pro Arg Ala Ser Arg	Leu Leu Leu Gly Gly Cys			
100	105	110		

<210> 3573

<211> 1236

<212> DNA

<213> Homo sapiens

<400> 3573

```

gggggggggg ttatcccttg tttgggaagg ccgggctgtt cttcataatg gggcattttc
60
tagccccaga ttaagggggc agtttctttc tttccggcca ccagcgggca ggatcacccc
120
ccctgcctgc tccccaaagc ccagccttca gcccccccaa tcaatcccag ccacacacac
180
agtcccattt tttccatcca ttctgggtact tgtgtgttca ataaacctgg tggacacaca
240
gcttcacata cccacacact cacagccaca aaccacagaa gtcattgcaca tgccgacgca
300
ccttgtggca catgcacaca caaccacact tgtgtgcaaa gtggcagaca caccacaca
360
tgcatagaag caagtctctg gacccttctt gcatccacaca gagggggctc ccctgctgtg
420
tttgatttgt tcttcgaagc ggcctgccct gcctccgtgc aggaggatcc cccatcctg
480
cggcagttcc ctccagactt cagggaccag gaagctatgc agatggtgcc taaattctgc
540
ttcccttttg atgtggaaag ggggcccccc agccccgcgc tgcagcattt caccttcgcc
600
ctcagagacc ttgccggcaa ccgcagattt ggtttctgcc gcctgcgggc gggatcccag
660
agctgtctct gtatcctcag ccacctgcct tggttcgagg tgttttacaa gctattgaac
720
acagtgggag acctcctagc ccaggaccaa gtcaccgagg cagaggaact tcttcaaaat
780
ctgtttcagc agtccctgtc tgggccccag gcctcagtgg ggcttgagct gggcagcgga
840
gtgacgggtc ccagcgggca gggatatcca cccctaccc gggggaatag caagccgctt
900
tcctgcttcg tggccccgga ctccggccgc ctgccatcca tccctgagaa caggaacctc
960
acggagctgg tgggtggcgt gactgacgag aacatcgtgg ggctgttcgc ggcgctcctg
1020
gccgagagaa gagtcctgct caccgccagc aaactcagca ccttgaggcg gggccgccc
1080
ggccgggggtg ggagcagggc ctggctccgc cccggggggc gggacaaggg ggctgattcc
1140
ttgctctaac cctactgcgc gagaccgag ggcgaagtcc tggccccgcc ccttcgaagg
1200

```

tctttgagag tttaactctn gccccgcct cttggg
1236

<210> 3574
<211> 361
<212> PRT
<213> Homo sapiens

<400> 3574
Pro Gln Ile Lys Gly Ala Val Ser Phe Phe Pro Ala Thr Ser Gly Gln
1 5 10 15
Asp His Pro Pro Cys Leu Leu Pro Lys Ala Gln Pro Ser Ala Pro Pro
20 25 30
Ile Asn Pro Ser His Thr His Ser Pro Ile Phe Ser Ile His Ser Gly
35 40 45
Thr Cys Val Phe Asn Lys Pro Gly Gly His Thr Ala Ser His Thr His
50 55 60
Thr Leu Thr Ala Thr Asn Pro Arg Ser His Ala His Ala Asp Ala Pro
65 70 75 80
Cys Gly Thr Cys Thr His Asn His Thr Cys Val Gln Ser Gly Arg His
85 90 95
Thr His Thr Cys Ile Glu Ala Ser Leu Trp Thr Pro Ser Ala Ser His
100 105 110
Arg Gly Gly Ser Pro Ala Val Phe Asp Trp Phe Phe Glu Ala Ala Cys
115 120 125
Pro Ala Ser Val Gln Glu Asp Pro Pro Ile Leu Arg Gln Phe Pro Pro
130 135 140
Asp Phe Arg Asp Gln Glu Ala Met Gln Met Val Pro Lys Phe Cys Phe
145 150 155 160
Pro Phe Asp Val Glu Arg Gly Pro Pro Ser Pro Ala Val Gln His Phe
165 170 175
Thr Phe Ala Leu Thr Asp Leu Ala Gly Asn Arg Arg Phe Gly Phe Cys
180 185 190
Arg Leu Arg Ala Gly Thr Gln Ser Cys Leu Cys Ile Leu Ser His Leu
195 200 205
Pro Trp Phe Glu Val Phe Tyr Lys Leu Leu Asn Thr Val Gly Asp Leu
210 215 220
Leu Ala Gln Asp Gln Val Thr Glu Ala Glu Glu Leu Leu Gln Asn Leu
225 230 235 240
Phe Gln Gln Ser Leu Ser Gly Pro Gln Ala Ser Val Gly Leu Glu Leu
245 250 255
Gly Ser Gly Val Thr Val Ser Ser Gly Gln Gly Ile Pro Pro Pro Thr
260 265 270
Arg Gly Asn Ser Lys Pro Leu Ser Cys Phe Val Ala Pro Asp Ser Gly
275 280 285
Arg Leu Pro Ser Ile Pro Glu Asn Arg Asn Leu Thr Glu Leu Val Val
290 295 300
Ala Val Thr Asp Glu Asn Ile Val Gly Leu Phe Ala Ala Leu Leu Ala
305 310 315 320
Glu Arg Arg Val Leu Leu Thr Ala Ser Lys Leu Ser Thr Leu Arg Arg
325 330 335
Gly Pro Pro Gly Arg Gly Gly Ser Arg Ala Trp Leu Arg Pro Gly Gly
340 345 350
Arg Asp Lys Gly Ala Asp Ser Leu Leu

355

360

<210> 3575

<211> 769

<212> DNA

<213> Homo sapiens

<400> 3575

tgatcagctc ctgtcggagt tcatcggcca tgaagaagga aggtgcgttt gctttcgggt
 60
 gcataaagc aacgtgaggt gcagttggag gataaatatg atagtttggg aacaccattc
 120
 cagtcaaagg tgctggaggt gtgtctgtat agaagtaagt cgtccacca acagtttcct
 180
 tttggatcac ctgaccagaa gacggagtct gagaaacagg attattaaca gatgtagagg
 240
 cactagaagg caccatgtaa cttgctggat ttggagtgtg acttcttctt ctgggagcag
 300
 gagaagtatg tggagtaatc ttgggggaat gaagagggga agaccagca gacaacgaca
 360
 ttcttgaaga ggatgtaaaa atgtttctta atggagcaat aattggtttt agagaacaag
 420
 tctggaaaat aaaatgcaaa cattcatttg gaagaaacat catctttggg atcgtaagt
 480
 caaagatgaa ggaaataatt ttatcttggt ttgttgtaga aaaagctctg attaaagcaa
 540
 atgtaaagtt tcttttttca aatgtactta tttcaaata tgtagcaga tttactgcaa
 600
 gaatagtctc ctccatatca aggtttacat caggaaattt aatagcaaga gtgacaaaa
 660
 atttaataaa ttaatggaag agtgggaagt aacagaattg tggctcttta taaaattatg
 720
 ccttttataa aagtttttct tttataaaag gcataattcc ttttttatt
 769

<210> 3576

<211> 205

<212> PRT

<213> Homo sapiens

<400> 3576

Met	Glu	Glu	Thr	Ile	Leu	Ala	Val	Asn	Leu	Leu	Thr	Tyr	Leu	Glu	Ile
1				5				10					15		
Ser	Thr	Phe	Glu	Lys	Arg	Asn	Phe	Thr	Phe	Ala	Leu	Ile	Arg	Ala	Phe
			20					25					30		
Ser	Thr	Thr	Lys	Gln	Asp	Lys	Ile	Ile	Ser	Phe	Ile	Phe	Ala	Leu	Thr
			35				40					45			
Ile	Pro	Lys	Met	Met	Phe	Leu	Pro	Asn	Glu	Cys	Leu	His	Phe	Ile	Phe
			50			55					60				
Gln	Thr	Cys	Ser	Leu	Lys	Pro	Ile	Ile	Ala	Pro	Leu	Arg	Asn	Ile	Phe
65					70				75					80	
Thr	Ser	Ser	Ser	Gly	Met	Ser	Leu	Ser	Ala	Gly	Ser	Ser	Pro	Leu	His
				85				90					95		
Ser	Pro	Lys	Ile	Thr	Pro	His	Thr	Ser	Pro	Ala	Pro	Arg	Arg	Arg	Ser

	100		105		110
His Thr Pro Asn Pro Ala Ser Tyr Met Val Pro Ser Ser Ala Ser Thr					
	115		120		125
Ser Val Asn Asn Pro Val Ser Gln Thr Pro Ser Ser Gly Gln Val Ile					
	130		135		140
Gln Lys Glu Thr Val Gly Gly Thr Thr Tyr Phe Tyr Thr Asp Thr Thr					
145		150		155	160
Pro Ala Pro Leu Thr Gly Met Val Phe Pro Asn Tyr His Ile Tyr Pro					
	165		170		175
Pro Thr Ala Pro His Val Ala Tyr Met Gln Pro Lys Ala Asn Ala Pro					
	180		185		190
Ser Phe Phe Met Ala Asp Glu Leu Arg Gln Glu Leu Ile					
	195		200		205

<210> 3577

<211> 1225

<212> DNA

<213> Homo sapiens

<400> 3577

gtgcactcca ttccggcgta gtttgagttc agtgtggact ctttccaaat catcctggat
 60
 tctttgcttt tcttctatga ctgttccaat aatcccattt ctgagcactt ccaccccacc
 120
 gtgattgggg agagcatgta cggggacttt gaggaagctt ttgaccatct gcagaacaga
 180
 ctgatcgcca ccaagaaccc agaagaaatc agaggcgggg gacttctcaa gtacagcaac
 240
 cttcttgtgc gggacttcag gccacagac caggaagaaa tcaaaactct agagcgctac
 300
 atgtgctcca ggttcttcat cgacttcccg gacatccttg aacagcagag gaagttggag
 360
 acttaccttc aaaaccactt cgctgaagaa gagagaagca agtacgacta cctcatgac
 420
 cttcgcaggg tggatgaagc gagcaccgtg tgtctcatgg ggcaggaacg caggcagact
 480
 ctgaacctca tctccctcct ggccttgctg gtgctgggag gaacaaaaca tcatcccca
 540
 gtgccacca ggtcacctgt tactaccagc ggtcccctta gtcagtgatg gcaacttcag
 600
 caactactac gttgcccac ctccagtcac ctacagccag ccttacccta cctggctgcc
 660
 ctgtaactaa ccttgagacc tgagggtttc cacagtggga accccaatag ggctagggct
 720
 ctcaggtagg ggagctcctt ctagatgtag gcatttgact tttaaagggg aactcagctc
 780
 tgattctgct tttttttttt tttttccttt gtgtacccat tggaatgggt ctacagtgt
 840
 tcatgagcca accctcaaag gaccggtatt acagtggcac gttggaaaac gctacaggaa
 900
 gcataccta tccacatctt tccaagatag aactaacat gtcagtgtcc aacatttag
 960
 acgtgggggt tgagctctgt gcagtaatcg agattgggag aatttgggca gcgctgaga
 1020

agtgctaagc tacttggttt ctcacttgag cccgggtagg ctgtgttggc cctcacttgg
 1080
 gattctcagc agttacatga aagttgtgct gataatctct tctcttgtag caatttttagt
 1140
 caggcagaaa atggttaaaca tgaggggtgct cttgtgactt aatttttgtt caagggacta
 1200
 agttgcttat gtttattccc tgtca
 1225

<210> 3578

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3578

Val	Asp	Ser	Ile	Arg	Gln	Phe	Glu	Phe	Ser	Val	Asp	Ser	Phe	Gln	
1			5				10				15				
Ile	Ile	Leu	Asp	Ser	Leu	Leu	Phe	Phe	Tyr	Asp	Cys	Ser	Asn	Asn	Pro
		20					25						30		
Ile	Ser	Glu	His	Phe	His	Pro	Thr	Val	Ile	Gly	Glu	Ser	Met	Tyr	Gly
		35				40					45				
Asp	Phe	Glu	Glu	Ala	Phe	Asp	His	Leu	Gln	Asn	Arg	Leu	Ile	Ala	Thr
	50				55					60					
Lys	Asn	Pro	Glu	Glu	Ile	Arg	Gly	Gly	Gly	Leu	Leu	Lys	Tyr	Ser	Asn
65				70					75					80	
Leu	Leu	Val	Arg	Asp	Phe	Arg	Pro	Thr	Asp	Gln	Glu	Glu	Ile	Lys	Thr
			85					90					95		
Leu	Glu	Arg	Tyr	Met	Cys	Ser	Arg	Phe	Phe	Ile	Asp	Phe	Pro	Asp	Ile
		100					105						110		
Leu	Glu	Gln	Gln	Arg	Lys	Leu	Glu	Thr	Tyr	Leu	Gln	Asn	His	Phe	Ala
		115					120					125			
Glu	Glu	Glu	Arg	Ser	Lys	Tyr	Asp	Tyr	Leu	Met	Ile	Leu	Arg	Arg	Val
	130				135					140					
Val	Asn	Glu	Ser	Thr	Val	Cys	Leu	Met	Gly	His	Glu	Arg	Arg	Gln	Thr
145				150					155					160	
Leu	Asn	Leu	Ile	Ser	Leu	Leu	Ala	Leu	Arg	Val	Leu	Gly	Gly	Thr	Lys
			165					170						175	
His	His	Pro	Pro	Val	Pro	Pro	Arg	Ser	Pro	Val	Thr	Thr	Ser	Gly	Pro
		180					185						190		
Leu	Ser	Gln													
		195													

<210> 3579

<211> 755

<212> DNA

<213> Homo sapiens

<400> 3579

acgcgtgatg tcactgagaa tgtttgctca cagtcaataa ttgtctttgt ggatgtgata
 60
 attttggaga tacacttctg gtcagaactc aggtgagata atcttgcaat actccaaatg
 120
 cagatactcc agccacccgc aaggttccag gaaaggacaa tgtcctgcga gaaaatcagg
 180

aggcctccac ttcttgggcc acttgagaag ttcttgggca tgtcactaca tgttggttga
 240
 cttagccatt tctcatgctg ttttgtttct tgcggtggcc acttaacccc aaagaatgaa
 300
 gggaggatcc acagtgaaag tgcctgagtt tctctatgag accagatgct gtcgaaacca
 360
 aacatctttt cctttgctct atgggaacat tttagggttt gttttgcaca gctggtttcc
 420
 agactagaag attaacaagt ttgggtccac ccctaagaat cagtggctgt cttttaaggt
 480
 gaggagtgtg ggcttaactg aggtcctttg agggagctat aaaggagaaa caacctggga
 540
 catcccagtt ttctatttcc tccactgtta atatctcacc taaaataatt catgagttaa
 600
 aatggtaaat atatgcttta agctctacct ttaaacttgt atgttattca ggcattctct
 660
 attaaagatac tgggtctctg gatacccaag gaaatgttgg ctttttattc ttatgtgggt
 720
 ccaaatttac ttctcttcag ttaattgtc catgg
 755

<210> 3580
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 3580
 Met Phe Gly Phe Asp Ser Ile Trp Ser His Arg Glu Thr Gln Ala Leu
 1 5 10 15
 Ser Leu Trp Ile Leu Pro Ser Phe Phe Gly Val Lys Trp Pro Pro Gln
 20 25 30
 Glu Thr Lys Gln His Glu Lys Trp Leu Ser Gln Pro Thr Cys Ser Asp
 35 40 45
 Met Pro Arg Asn Phe Ser Ser Gly Pro Gly Ser Gly Gly Leu Leu Ile
 50 55 60
 Phe Ser Gln Asp Ile Val Leu Ser Trp Asn Leu Ala Gly Gly Trp Ser
 65 70 75 80
 Ile Cys Ile Trp Ser Ile Ala Arg Leu Ser His Leu Ser Ser Asp Gln
 85 90 95
 Lys Cys Ile Ser Lys Ile Ile Thr Ser Thr Lys Thr Ile Ile Asp Cys
 100 105 110
 Glu Gln Thr Phe Ser Val Thr Ser Arg
 115 120

<210> 3581
 <211> 2132
 <212> DNA
 <213> Homo sapiens

<400> 3581
 nnggcgcccc ggcggtgctg cgctgccaga gccgcgcac ggtgtggacc caggaccggc
 60
 tgcacgaccg ccagcgcggtg ctccactggg acctgcgcgg ccccgggggg ggcgccgcgc
 120

ggcgccctgct ggacttgtag tcggcgggcg agcagcgctg gtacgaggcg cgggaccgcg
180
gccgcctgga gctctcgccc tcggccttcg acgacggcaa cttctcgctg ctcatccgcg
240
cgggtggagga gacggacgcg gggctgtaca cctgcaacct gcaccatcac tactgccacc
300
tctacgagag cctggcgctc cgcctggagg tcaccgacgg ccccccggcc acccccgctt
360
actgggacgg cgagaaggag gtgctggcgg tggcgcgcg cgaccccgcg cttctgacct
420
gcgtgaaccg cgggcacgtg tggaccgacc ggcacgtgga ggaggctcaa cagggtggtgc
480
actgggaccg gcagccgccc ggggtcccg cgcacggcgc ggaccgcctg ctggacctct
540
acgcgtcggg cgagcgccgc gcctacgggc cctttttct gcgcgaccgc gtggctgtgg
600
gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgccg
660
acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgcgcg
720
tcttccacct gacggctcgc gaacccacg cggagccgcc ccccggggc tctccgggca
780
acggctccag ccacagcggc gcccagggc cagacccac actggcgcg gccacacaacg
840
tcatcaatgt catcgcccc gagagccgag cccacttctt ccagcagctg ggctacgtgc
900
tggeccagct gctgctcttc atcctgtac tggctactgt cctcctggcc gcccgcaggc
960
gccgcggagg ctacgaatac tcggaccaga agtcgggaaa gtcaaagggg aaggatgtta
1020
acttgcgga gttcgctgtg gctgcagggg accagatgct ttacaggagt gaggacatcc
1080
agctagatta caaaaacaac atcctgaagg agagggcgga gctggccac agccccctgc
1140
ctgccaagta catcgacct gacaaaggg tccggaagga gaactgcaa tagggaggcc
1200
ctgggctcct ggctgggcca gcagctgcac ctctcctgtc tgtgctctc ggggcatctc
1260
ctgatgctcc ggggtcacc ccccttcag cggttggtcc cgttttctg gaatttgcc
1320
tgggcgtatg cagagccgc ctccacacc ctccccagg ggcttggtgg cagcatagcc
1380
cccacccctg cggcctttgc tcacgggtgg ccctgccac cctggcaca accaaaatcc
1440
cactgatgcc catcatgccc tcagaccctt ctgggctctg cccgctgggg gcctgaagac
1500
attcctggag gacactccca tcagaacctg gcagcccaa aactggggtc agcctcaggg
1560
caggagtccc actcctccag ggctctgctc gtcgggggtt gggagatgtt cctggaggag
1620
gacactccca tcagaacttg gcagcctga agttggggtc agcctcggca ggagtcccac
1680
tctcctggg gtgctgctg ccaccaagag ctccccacc tgtaccacca tgtgggactc
1740

caggcaccat ctgttctccc cagggacctg ctgacttgaa tgccagccct tgctcctctg
 1800
 tgttgctttg ggccacctgg ggetgcaccc cctgcccttt ctctgcccc tccctacctt
 1860
 agccttgctc tcagccacct tgatagtcac tgggctccct gtgacttctg accctgacac
 1920
 cctcccttg gactctgcct gggctggagt ctagggtgg ggctacattt ggcttctgta
 1980
 ctggctgagg acaggggagg gagtgaagtt ggtttgggtt ggcctgtgtt gccactctca
 2040
 gcacccaca tttgcatctg ctggtggacc tgccaccatc acaataaagt ccccatctga
 2100
 tttttaaaaa aaaaaaaaaa aaaaaaaaaa aa
 2132

<210> 3582

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3582

Xaa	Ala	Pro	Gly	Arg	Cys	Cys	Ala	Ala	Arg	Ala	Arg	Ala	Trp	Cys	Gly
1			5					10					15		
Pro	Arg	Thr	Gly	Cys	Thr	Thr	Ala	Ser	Ala	Cys	Ser	Thr	Gly	Thr	Cys
			20					25					30		
Ala	Ala	Pro	Gly	Val	Ala	Pro	Arg	Gly	Ala	Cys	Trp	Thr	Cys	Thr	Arg
			35				40					45			
Arg	Ala	Ser	Ser	Ala	Cys	Thr	Arg	Arg	Gly	Thr	Ala	Ala	Ala	Trp	Ser
			50				55				60				
Ser	Arg	Pro	Arg	Pro	Ser	Thr	Thr	Ala	Thr	Ser	Arg	Cys	Ser	Ser	Ala
						70				75				80	
Arg	Trp	Arg	Arg	Arg	Thr	Arg	Gly	Cys	Thr	Pro	Ala	Thr	Cys	Thr	Ile
					85				90				95		
Thr	Thr	Ala	Thr	Ser	Thr	Arg	Ala	Trp	Pro	Ser	Ala	Trp	Arg	Ser	Pro
			100					105					110		
Thr	Ala	Pro	Arg	Pro	Pro	Pro	Pro	Thr	Gly	Thr	Ala	Arg	Arg	Arg	Cys
			115				120					125			
Trp	Arg	Trp	Arg	Ala	Ala	His	Pro	Arg	Phe						
			130				135								

<210> 3583

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 3583

tcattgagggg agagaatggc gccattttgc ggtacggaag ctacacagca acacgtatag
 60
 gagactctcc ccgagatctt ctagggagtg acccatctat ttttgtttgg gaagaggaaa
 120
 ctccgaaatg ggatcgcgga agacttaaag ggccaggctg attttttttt cctactgcag
 180
 gtctctgagg ctgtggttgc tacagggtca ccacagactt ggcttacttg tctcatcctt
 240

cccttgctg gtatcatttt ctcagttctc ccaaaagcca tgtcccggcc cttgtctatc
 300
 accttcaccc cagccactga cccagcgac ctctggaagg atgggcagca gcagccacag
 360
 cccgagaagc cagagtccac cctggatggg gctgcagccc gagctttcta tgaggccctg
 420
 attggggatg agagcagcgc tcctgactcc cagagatctc agactgaacc tgccagagaa
 480
 agaaagagaa agaaaagaag aataatgaag gcaccagcag cagaagcagt ggcagaagga
 540
 gcatcaggaa gacatggaca agggagatcc cttgaggctg aggataagat gactcaccgg
 600
 atactgaggg cagcccagga gggggacctg ccagaactta ggagactgct ggaaccgcat
 660
 gaggcaggag gagctggggg gaatatcaac gcccgggatg ctttctggtg gacccactg
 720
 atgtgtgctg ctcgagcggg ccagggggca gctgtgagct atctcctggg ccgtggggct
 780
 gcctgggtgg gggctctgtg gctgagtggc agggatgcgg ctcagctcgc tgaagaagct
 840
 ggcttcctct aggtagcccc catggtcagg gagagccatg gagagacaag gagcccggaa
 900
 aaccgggtct ctactccctc cctccagtac tgcgagaact gtgacacca cttccaagat
 960
 tccaaccacc gcacatccac tgctcacctg ctgtcactgt cgcagggtcc tcagcctccc
 1020
 aaccttcac ttgggtgccc catctccagc ccgggcttca aactgctgct gagggggggg
 1080
 tgggagccag gaatggggct gggaccccg ggtgagggcc gtgccaatcc catccccact
 1140
 gtctcaaga gggaccagga aggactaggc tacagatcag caccacagcc ccgagtgaca
 1200
 catttcccag cttgggatac ccgagctgtg gctgggaggg agagaccccc tcgggtggcc
 1260
 acactgagct ggaggagga gagaaggagg gaggagaaag acagggcttg ggagcgggat
 1320
 ctaaggactt acatgaacct cgagttctga ctttggtaaa gtctgaccct agtctgctgc
 1380
 tgaagtctga acttgggect ctgacctggg ccctttgact tccccctcct gggatctgct
 1440
 cagatgcaga tcctgaagtt ttggtcaat aggcctctgtc ttcgtgagag acgggctgag
 1500
 agtcagaaat aaatcaacca tttgtggttt aaaaaaaaaa aaaaacaaag tttt
 1554

<210> 3584

<211> 356

<212> PRT

<213> Homo sapiens

<400> 3584

Met Ser Arg Pro Leu Leu Ile Thr Phe Thr Pro Ala Thr Asp Pro Ser
 1 5 10 15
 Asp Leu Trp Lys Asp Gly Gln Gln Gln Pro Gln Pro Glu Lys Pro Glu

```

                20                25                30
Ser Thr Leu Asp Gly Ala Ala Ala Arg Ala Phe Tyr Glu Ala Leu Ile
      35                40                45
Gly Asp Glu Ser Ser Ala Pro Asp Ser Gln Arg Ser Gln Thr Glu Pro
      50                55                60
Ala Arg Glu Arg Lys Arg Lys Lys Arg Arg Ile Met Lys Ala Pro Ala
      65                70                75                80
Ala Glu Ala Val Ala Glu Gly Ala Ser Gly Arg His Gly Gln Gly Arg
      85                90                95
Ser Leu Glu Ala Glu Asp Lys Met Thr His Arg Ile Leu Arg Ala Ala
      100                105                110
Gln Glu Gly Asp Leu Pro Glu Leu Arg Arg Leu Leu Glu Pro His Glu
      115                120                125
Ala Gly Gly Ala Gly Gly Asn Ile Asn Ala Arg Asp Ala Phe Trp Trp
      130                135                140
Thr Pro Leu Met Cys Ala Ala Arg Ala Gly Gln Gly Ala Ala Val Ser
      145                150                155                160
Tyr Leu Leu Gly Arg Gly Ala Ala Trp Val Gly Val Cys Glu Leu Ser
      165                170                175
Gly Arg Asp Ala Ala Gln Leu Ala Glu Glu Ala Gly Phe Pro Glu Val
      180                185                190
Ala Arg Met Val Arg Glu Ser His Gly Glu Thr Arg Ser Pro Glu Asn
      195                200                205
Arg Ser Pro Thr Pro Ser Leu Gln Tyr Cys Glu Asn Cys Asp Thr His
      210                215                220
Phe Gln Asp Ser Asn His Arg Thr Ser Thr Ala His Leu Leu Ser Leu
      225                230                235                240
Ser Gln Gly Pro Gln Pro Pro Asn Leu Pro Leu Gly Val Pro Ile Ser
      245                250                255
Ser Pro Gly Phe Lys Leu Leu Leu Arg Gly Gly Trp Glu Pro Gly Met
      260                265                270
Gly Leu Gly Pro Arg Gly Glu Gly Arg Ala Asn Pro Ile Pro Thr Val
      275                280                285
Leu Lys Arg Asp Gln Glu Gly Leu Gly Tyr Arg Ser Ala Pro Gln Pro
      290                295                300
Arg Val Thr His Phe Pro Ala Trp Asp Thr Arg Ala Val Ala Gly Arg
      305                310                315                320
Glu Arg Pro Pro Arg Val Ala Thr Leu Ser Trp Arg Glu Glu Arg Arg
      325                330                335
Arg Glu Glu Lys Asp Arg Ala Trp Glu Arg Asp Leu Arg Thr Tyr Met
      340                345                350
Asn Leu Glu Phe
      355

```

<210> 3585

<211> 2782

<212> DNA

<213> Homo sapiens

<400> 3585

```

ncgcacgcgc agtcgtatcc gtgtgatggg cgggctgttg acggcgtgc gatggctgcc
60
tgcgagggca ggagaagcgg agctctcggt tctctcagt cggacttcct gacgccgcc
120

```

gtgggcgggg ccccttgggc cgtegccacc actgtagtca tgtacccacc gcgcgcgcg
180
ccgcctcatc gggacttcat ctcggtgacg ctgagctttg gcgagagcta tgacaacagc
240
aagagttggc ggcggcgctc gtgctggagg aaatggaagc aactgtcgag attgcagcgg
300
aatatgattc tcttctctct tgcctttctg cttttctgtg gactcctctt ctacatcaac
360
ttggctgacc attggaaagc tctggctttc aggctagagg aagagcagaa gatgaggcca
420
gaaattgctg ggttaaaacc agcaaatacca cccgtcttac cagctcctca gaaggcggac
480
accgacctg agaacttacc tgagatttcg tcacagaaga cacaagaca catccagcgg
540
ggaccacctc acctgcagat tagaccccca agccaagacc tgaaggatgg gaccagagg
600
gaggccacaa aaaggcaaga agcccctgtg gatccccgcc cggaaggaga tccgcagagg
660
acagtcatca gctggagggg agcgggtgatc gagcctgagc agggcaccga gctcccttca
720
agaagagcag aagtgcctac caagcctccc ctgccaccgg ccaggacaca gggcacacca
780
gtgcatctga actatcgcca gaaggcgctg attgacgtct tctgcatgc atggaaagga
840
taccgcaagt ttgcatgggg ccatgacgag ctgaagcctg tgtccaggtc cttcagttag
900
tggtttggcc tcggtctcac actgatcgac gcgctggaca ccatgtggat cttgggtctg
960
aggaaagaat ttgaggaagc caggaagtgg gtgtcgaaga agttacactt tgaaaaggac
1020
gtggacgtca acctgtttga gagcacgatc cgcctcctgg gggggctcct gagtgcctac
1080
cacctgtctg gggacagcct cttcttgagg aaagctgagg attttggaaa tcggctaatt
1140
cctgccttca gaacaccatc caagattcct tactcgatg tgaacatcgg tactggagtt
1200
gccacccgc caccgtggac ctccgacagc actgtggccg aggtgaccag cattcagctg
1260
gagttccggg agctctcccg tctcacaggg gataagaagt ttcaggaggc agtggagaag
1320
gtgacacagc acatccacgg cctgtctggg aagaaggatg ggctgggtgcc catgttcac
1380
aatacccaca gtggcctctt caccacctg ggcgtattca cgctgggcgc cagggccgac
1440
agctactatg agtacctgct gaagcagtgg atccaggcg ggaagcagga gacacagctg
1500
ctggaagact acgtggaagc catcgagggt gtcagaacgc acctgctgcg gcactccgag
1560
cccagtaagc tcacctttgt gggggagctt gccacggcc gcttcagtgc caagatggac
1620
cacctgggtg gcttcttgcc agggacgctg gctctgggcy tctaccacgg cctgcccgc
1680
agccacatgg agctggccca ggagctcatg gagacttggt accagatgaa ccggcagatg
1740

gagacggggc tgagtccga gatcgtgcac ttcaaccttt acccccagcc gggccgtcgg
 1800
 gacgtggagg tcaagccagc agacaggcac aacctgctgc ggccagagac cgtggagagc
 1860
 ctgttctacc tgtaccgct cacaggggac cgcaaatacc aggactggg ctgggagatt
 1920
 ctgcagagct tcagccgatt cacacgggtc cctcgggtg gctattcttc catcaacaat
 1980
 gtccaggatc ctcagaagcc cgagcctagg gacaagatgg agagcttctt cctgggggag
 2040
 acgtccaagt atctgttctt gctcttctcc gatgaccaa acctgctcag cctggacgcc
 2100
 tacgtgttca acaccgaagc ccacctctg cctatctgga cccctgccta ggggtgatgg
 2160
 ctgctggtgt ggggacttcg ggtgggcaga ggcacctgc tgggtctgtg gcattttcca
 2220
 agggcccacg tagcaccggc aaccgccaag tggcccaggc tctgaactgg ctctgggctc
 2280
 ctctcgtct ctgctttaat caggacaccg tgaggacaag tgaggccgtc agtcttggtg
 2340
 tgatgcgggg tgggctgggc cgctggagcc tccgctgct tctccagaa gacacgaatc
 2400
 atgactcacg attgtgaag cctgagcagg tctctgtggg ccgaccagag gggggcttcg
 2460
 aggtggtccc tgggtactgg gtgaccgagt ggacagccca ggtgcagct ctgccggggc
 2520
 tcgtgaagcc tcagatgtcc ccaatccaag ggtctggagg ggctgccgtg actccagagg
 2580
 cctgaggctc cagggctggc tctggtgttt acaagctgga ctcagggatc ctctgggccg
 2640
 ccccgagggg ggcttggagg gctggacggc aagtccgtct agctcacggg cccctccagt
 2700
 ggaatgggtc ttttcggtgg agataaaagt tgatttgctc taiaaaaaaa aiaaaaaaaa
 2760
 aiaaaaaaaa aiaaaaaaaa aa
 2782

<210> 3586

<211> 663

<212> PRT

<213> Homo sapiens

<400> 3586

Met Tyr Pro Pro Pro Pro Pro Pro His Arg Asp Phe Ile Ser Val
 1 5 10 15
 Thr Leu Ser Phe Gly Glu Ser Tyr Asp Asn Ser Lys Ser Trp Arg Arg
 20 25 30
 Arg Ser Cys Trp Arg Lys Trp Lys Gln Leu Ser Arg Leu Gln Arg Asn
 35 40 45
 Met Ile Leu Phe Leu Leu Ala Phe Leu Leu Phe Cys Gly Leu Leu Phe
 50 55 60
 Tyr Ile Asn Leu Ala Asp His Trp Lys Ala Leu Ala Phe Arg Leu Glu
 65 70 75 80
 Glu Glu Gln Lys Met Arg Pro Glu Ile Ala Gly Leu Lys Pro Ala Asn

													85							90								95		
Pro	Pro	Val	Leu	Pro	Ala	Pro	Gln	Lys	Ala	Asp	Thr	Asp	Pro	Glu	Asn															
				100					105					110																
Leu	Pro	Glu	Ile	Ser	Ser	Gln	Lys	Thr	Gln	Arg	His	Ile	Gln	Arg	Gly															
				115					120					125																
Pro	Pro	His	Leu	Gln	Ile	Arg	Pro	Pro	Ser	Gln	Asp	Leu	Lys	Asp	Gly															
				130					135					140																
Thr	Gln	Glu	Glu	Ala	Thr	Lys	Arg	Gln	Glu	Ala	Pro	Val	Asp	Pro	Arg															
145					150					155					160															
Pro	Glu	Gly	Asp	Pro	Gln	Arg	Thr	Val	Ile	Ser	Trp	Arg	Gly	Ala	Val															
				165					170					175																
Ile	Glu	Pro	Glu	Gln	Gly	Thr	Glu	Leu	Pro	Ser	Arg	Arg	Ala	Glu	Val															
				180					185					190																
Pro	Thr	Lys	Pro	Pro	Leu	Pro	Pro	Ala	Arg	Thr	Gln	Gly	Thr	Pro	Val															
				195					200					205																
His	Leu	Asn	Tyr	Arg	Gln	Lys	Gly	Val	Ile	Asp	Val	Phe	Leu	His	Ala															
				210					215					220																
Trp	Lys	Gly	Tyr	Arg	Lys	Phe	Ala	Trp	Gly	His	Asp	Glu	Leu	Lys	Pro															
225					230					235					240															
Val	Ser	Arg	Ser	Phe	Ser	Glu	Trp	Phe	Gly	Leu	Gly	Leu	Thr	Leu	Ile															
				245					250					255																
Asp	Ala	Leu	Asp	Thr	Met	Trp	Ile	Leu	Gly	Leu	Arg	Lys	Glu	Phe	Glu															
				260					265					270																
Glu	Ala	Arg	Lys	Trp	Val	Ser	Lys	Lys	Leu	His	Phe	Glu	Lys	Asp	Val															
				275					280					285																
Asp	Val	Asn	Leu	Phe	Glu	Ser	Thr	Ile	Arg	Ile	Leu	Gly	Gly	Leu	Leu															
				290					295					300																
Ser	Ala	Tyr	His	Leu	Ser	Gly	Asp	Ser	Leu	Phe	Leu	Arg	Lys	Ala	Glu															
305					310					315					320															
Asp	Phe	Gly	Asn	Arg	Leu	Met	Pro	Ala	Phe	Arg	Thr	Pro	Ser	Lys	Ile															
				325					330					335																
Pro	Tyr	Ser	Asp	Val	Asn	Ile	Gly	Thr	Gly	Val	Ala	His	Pro	Pro	Arg															
				340					345					350																
Trp	Thr	Ser	Asp	Ser	Thr	Val	Ala	Glu	Val	Thr	Ser	Ile	Gln	Leu	Glu															
				355					360					365																
Phe	Arg	Glu	Leu	Ser	Arg	Leu	Thr	Gly	Asp	Lys	Lys	Phe	Gln	Glu	Ala															
				370					375					380																
Val	Glu	Lys	Val	Thr	Gln	His	Ile	His	Gly	Leu	Ser	Gly	Lys	Lys	Asp															
385					390					395					400															
Gly	Leu	Val	Pro	Met	Phe	Ile	Asn	Thr	His	Ser	Gly	Leu	Phe	Thr	His															
				405					410					415																
Leu	Gly	Val	Phe	Thr	Leu	Gly	Ala	Arg	Ala	Asp	Ser	Tyr	Tyr	Glu	Tyr															
				420					425					430																
Leu	Leu	Lys	Gln	Trp	Ile	Gln	Gly	Gly	Lys	Gln	Glu	Thr	Gln	Leu	Leu															
				435					440					445																
Glu	Asp	Tyr	Val	Glu	Ala	Ile	Glu	Gly	Val	Arg	Thr	His	Leu	Leu	Arg															
				450					455					460																

```
<210> 3587
<211> 3148
<212> DNA
<213> Homo sapiens
```

```

<400> 3587
nctttttttt ttttttttga gtgtggggtc agttttattgg gcatgcgtca gtcagaggct
60
gggcttgcca gggtcgggta gggcagcagt ttgtctggac cccgagaaac ccaactggaa
120
tccagggcct catctgcttc aaagccaaag tcttctctaa ccttaatctg caccggggcc
180
agctctggag tcagcgcatt tcctgctcgg cgctccatccc gtggcactcg ccgcctcttc
240
cgcccactgg gcccttcacc gggggctggg ctgccggggt ctgggggtgc aggagtccct
300
ctgggcgggg acagtgtctc tttctctgga ggctcattct ccgcattgcc tgggggtgggg
360
gcatccgtgc cctggctgcc ctcatcctcc agcacaaatgg tgaactggct ggcccggtag
420
tcattcccgt aggagtccag cactctcatg aggaacctcc gtctctgctg cagcctccga
480
gttatctctt gcacctgatg gagcctgttc aggaccgct cgttcacctg ctcgatctcc
540
cggcagcgcc gacctagtgc ctggtacttt ctgcgattta attcccgtg gcgccgcgcg
600
cgaccccggg ctgcctcttc ctcttcatct cgctcccgga gccctgagcc gccagacca
660
cctgacacaa actccacttc cgtctccagc tcgctctcca ggatgtggcc accaaatagg
720
ggaggcaacg ccaactctga gcctggcggc gctgagaact cctcaaagcc cacggctgcc
780
atggtcctct ctctctgctc caattccatc tccgcgacct ccggaagccc cgggcctcag
840

```

agcttccgac ctcttcaatc tgtaggttaa gccgttcgca aaactacttg tcccatcagg
900
ctcagcagcc gaggacggcg ggacgtggcc ctaggccttg tgggagttgt agtttcctgt
960
ttccggcttc gcttcggccc acccccacgt ccaccccgaa tccctgctta aaggccttgc
1020
tttcttgtct aacgccgcaa ccagtcctct gagttgccaa cgtctttctt cttgtctcga
1080
cgccccgtcg tccggccaca gcgattctct gcttagcagg atcgggtccac agcgggacgt
1140
gagtcctctt cctcctcgcg gcttaccgct ctctccgcct agtgccagggt gctaataaag
1200
ttgttgtttc aaatgcggcc aggaacatcg cgagcgggga ccaatcagag agtagctttg
1260
cctctataac ggcgcgagag tgagacgtca tcggtgagcg actaacgcta gaaacagtgg
1320
tgccgggaga ggagaggcct cgggatgtct ctggcagatg agctcttagc tgatctcgaa
1380
gaggcagcag aagaggagga aggaggaagc tatggggagg aagaagagga gccagcgatc
1440
gaggatgtgc aggaggagac acagctggat ctttccgggg attcagtcga gaccatcgcc
1500
aagctatggg atagtaagat gtttgctgag attatgatga agattgagga gtatatcagc
1560
aagcaagcca aagcttcaga agtgatggga ccagtggagg ccgcgcctga ataccgcgtc
1620
atcgtggatg ccaacaacct gaccgtggag atcgaaaacg agctgaacat catccataag
1680
ttcatccggg ataagtactc aaagagattc cctgaactgg agtccttggt ccccaatgca
1740
ctggattaca tccgcacggt caaggagctg ggcaacagcc tggacaagtg caagaacaat
1800
gagaacctgc agcagatcct caccaatgcc accatcatgg tcgtcagcgt caccgcctcc
1860
accacccagg ggcagcagct gtcggaggag gagctcgagc ggctggagga ggctgcgac
1920
atggcgctgg agctgaacgc ctccaagcac cgcactctacg agtatgtgga gtcccggatg
1980
tccttcacg caccacaacct gtccatcatt atcggggcat ccacggccgc caagatcatg
2040
ggtgtggcgg gcggcctgac caacctctcc aagatgcccg cctgcaacat catgctgctc
2100
ggggcccagc gcaagacgct gtcgggcttc tcgtctacct cagtgtgtcc ccacaccggc
2160
tacatctacc acagtacat cgtgcagtcc ctgccaccgg atctgcggcg gaaagcggcc
2220
cggctgggtg ccgccaagtg cactctggca gcccggtgag acagtttcca cgagagcaca
2280
gaagggaagg tgggctacga actgaaggat gagatcgagc gcaaattcga caagtggcag
2340
gagccgccgc ctgtgaagca ggtgaagccg ctgcctgcgc cctgggatgg acagcggaag
2400
aagcagggcg gccgcaggta ccgcaagatg aaggagcggc tggggctgac ggagatccgg
2460

aagcaggcca accgtatgag cttcggagag atcgaggagg acgcctacca ggaggacctg
2520
ggattcagcc tgggccacct gggcaagtcg ggcagtgggc gtgtgcggca gacacaggta
2580
aacgaggcca ccaaggccag gatctccaag acgctgcagc ggaccctgca gaagcagagc
2640
gtcgtatatg gcgggaagtc caccatccgc gaccgctcct cgggcacggc ctccagcgtg
2700
gccttcaccc cactccaggg cctggagatt gtgaaccac aggcggcaga gaagaagggtg
2760
gctgaggcca accagaagta tttctccagc atggctgagt tcctcaaggt caaggcgag
2820
aagagtggcc ttatgtccac ctgaatgact gcgtgtgtcc aaggtggctt cccactgaag
2880
ggacacagag gtccagtcct tctgaagggc taggatcggg ttctggcagg gagaacctgc
2940
cctgccactg gcccattgc tgggactgcc caggaggagg gccttggaag agtcggcct
3000
ggcctcccc aggaccgaga tcaccgcca gtatgggcta gagcaggtct tcacatgcc
3060
ttgtctttt taactgagaa aggagatttt ttgaaaagag tacaattaaa aggacattgt
3120
caagatctgt caaaaaaaaa aaaaaaaaa
3148

<210> 3588

<211> 499

<212> PRT

<213> Homo sapiens

<400> 3588

Met	Ser	Leu	Ala	Asp	Glu	Leu	Leu	Ala	Asp	Leu	Glu	Glu	Ala	Ala	Glu
1				5					10					15	
Glu	Glu	Glu	Gly	Gly	Ser	Tyr	Gly	Glu	Glu	Glu	Glu	Glu	Pro	Ala	Ile
			20					25					30		
Glu	Asp	Val	Gln	Glu	Glu	Thr	Gln	Leu	Asp	Leu	Ser	Gly	Asp	Ser	Val
		35				40						45			
Lys	Thr	Ile	Ala	Lys	Leu	Trp	Asp	Ser	Lys	Met	Phe	Ala	Glu	Ile	Met
		50				55					60				
Met	Lys	Ile	Glu	Glu	Tyr	Ile	Ser	Lys	Gln	Ala	Lys	Ala	Ser	Glu	Val
65					70					75				80	
Met	Gly	Pro	Val	Glu	Ala	Ala	Pro	Glu	Tyr	Arg	Val	Ile	Val	Asp	Ala
			85						90					95	
Asn	Asn	Leu	Thr	Val	Glu	Ile	Glu	Asn	Glu	Leu	Asn	Ile	Ile	His	Lys
		100						105						110	
Phe	Ile	Arg	Asp	Lys	Tyr	Ser	Lys	Arg	Phe	Pro	Glu	Leu	Glu	Ser	Leu
		115					120						125		
Val	Pro	Asn	Ala	Leu	Asp	Tyr	Ile	Arg	Thr	Val	Lys	Glu	Leu	Gly	Asn
		130				135					140				
Ser	Leu	Asp	Lys	Cys	Lys	Asn	Asn	Glu	Asn	Leu	Gln	Gln	Ile	Leu	Thr
145					150					155				160	
Asn	Ala	Thr	Ile	Met	Val	Val	Ser	Val	Thr	Ala	Ser	Thr	Thr	Gln	Gly
			165						170					175	
Gln	Gln	Leu	Ser	Glu	Glu	Glu	Leu	Glu	Arg	Leu	Glu	Glu	Ala	Cys	Asp

```

      180      185      190
Met Ala Leu Glu Leu Asn Ala Ser Lys His Arg Ile Tyr Glu Tyr Val
      195      200      205
Glu Ser Arg Met Ser Phe Ile Ala Pro Asn Leu Ser Ile Ile Ile Gly
      210      215      220
Ala Ser Thr Ala Ala Lys Ile Met Gly Val Ala Gly Gly Leu Thr Asn
      225      230      235      240
Leu Ser Lys Met Pro Ala Cys Asn Ile Met Leu Leu Gly Ala Gln Arg
      245      250      255
Lys Thr Leu Ser Gly Phe Ser Ser Thr Ser Val Leu Pro His Thr Gly
      260      265      270
Tyr Ile Tyr His Ser Asp Ile Val Gln Ser Leu Pro Pro Asp Leu Arg
      275      280      285
Arg Lys Ala Ala Arg Leu Val Ala Ala Lys Cys Thr Leu Ala Ala Arg
      290      295      300
Val Asp Ser Phe His Glu Ser Thr Glu Gly Lys Val Gly Tyr Glu Leu
      305      310      315      320
Lys Asp Glu Ile Glu Arg Lys Phe Asp Lys Trp Gln Glu Pro Pro Pro
      325      330      335
Val Lys Gln Val Lys Pro Leu Pro Ala Pro Leu Asp Gly Gln Arg Lys
      340      345      350
Lys Arg Gly Gly Arg Arg Tyr Arg Lys Met Lys Glu Arg Leu Gly Leu
      355      360      365
Thr Glu Ile Arg Lys Gln Ala Asn Arg Met Ser Phe Gly Glu Ile Glu
      370      375      380
Glu Asp Ala Tyr Gln Glu Asp Leu Gly Phe Ser Leu Gly His Leu Gly
      385      390      395      400
Lys Ser Gly Ser Gly Arg Val Arg Gln Thr Gln Val Asn Glu Ala Thr
      405      410      415
Lys Ala Arg Ile Ser Lys Thr Leu Gln Arg Thr Leu Gln Lys Gln Ser
      420      425      430
Val Val Tyr Gly Gly Lys Ser Thr Ile Arg Asp Arg Ser Ser Gly Thr
      435      440      445
Ala Ser Ser Val Ala Phe Thr Pro Leu Gln Gly Leu Glu Ile Val Asn
      450      455      460
Pro Gln Ala Ala Glu Lys Lys Val Ala Glu Ala Asn Gln Lys Tyr Phe
      465      470      475      480
Ser Ser Met Ala Glu Phe Leu Lys Val Lys Gly Glu Lys Ser Gly Leu
      485      490      495
Met Ser Thr

```

<210> 3589

<211> 675

<212> DNA

<213> Homo sapiens

<400> 3589

```

tggtaaaaat ggtgaagaca ctggtgatgg caatggtgaa atgggaatgc cattgtgggt
60
catgaaatcg aaggatcatgg ttatggtggg aacaggaaca agcagaggca acttcctgag
120
aatagttctt gaccaggtc cctccatgaa cctcgaagct gaccagcca taggggggat
180

```

accttcattt cagtcccagc agcctccccc aaccagtcag ggtccctgaa gagcatctgg
 240
 ctctccacaa gacaatagac aggaagggga cccagtggcc cccccaagct tagctaattg
 300
 gagtgaagaa ccaggcagaa cccaggcagc agatgggata ggagtttcca agccagtgtg
 360
 tggggatagg ccctcccaat tcagaaacaa agcaaggccc tggccacagc caggaaggat
 420
 tgtaagggcc ttcttgagca gacacaaagg agccctgagc tgctgggggt gatgaggagc
 480
 ggaggcaggg ccaggcagag ggtctgcaaa gaattacact ggaaagggtg aagggggaca
 540
 ttgggtctag tggtttggcc tgtggagagc tgtcaggaga ggggaggatg aggttggtgg
 600
 agacgcctga ggcaagggtg tttgggggtc ttgttggcag catggtggca aaaggctcca
 660
 gaggcagcca cgcgt
 675

<210> 3590

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3590

Met	Leu	Pro	Thr	Arg	Pro	Pro	Asn	Thr	Leu	Ala	Ser	Gly	Val	Ser	Thr
1				5					10					15	
Asn	Leu	Ile	Leu	Pro	Ser	Pro	Asp	Ser	Ser	Pro	Gln	Ala	Lys	Pro	Leu
			20					25					30		
Asp	Pro	Met	Ser	Pro	Phe	His	Leu	Ser	Ser	Val	Ile	Leu	Cys	Arg	Pro
		35					40					45			
Ser	Ala	Trp	Pro	Cys	Leu	Arg	Ser	Ser	Pro	Pro	Ala	Ala	Gln	Gly	
	50					55				60					
Ser	Phe	Val	Ser	Ala	Gln	Glu	Gly	Pro	Tyr	Asn	Pro	Ser	Trp	Leu	Trp
65					70				75				80		
Pro	Gly	Pro	Cys	Phe	Val	Ser	Glu	Leu	Gly	Gly	Pro	Ile	Pro	Lys	His
			85					90					95		
Trp	Leu	Gly	Asn	Ser	Tyr	Pro	Ile	Cys	Cys	Leu	Gly	Ser	Ala	Trp	Phe
			100					105					110		
Phe	Thr	His	Ile	Ser											
			115												

<210> 3591

<211> 669

<212> DNA

<213> Homo sapiens

<400> 3591

nacgcgtgct ctgcgcttgc catgagactc ctgggagccg cagccgtcgc ggctctgggg
 60
 cgcggaaggg ccccccctc cctaggctgg cagaggaagc aggttaattg gaaggcctgc
 120
 cgatggctct catcaggggt gattcctaata gaaaaaatac gaaatattgg aatctcagct
 180

cacattgatt ctgggaaaac tacattaaca gaacgagtc tttactacac tggcagaatt
 240
 gcaaagatgc atgaggtgaa aggtaaagat ggagttggtg ctgtcatgga ttccatggaa
 300
 ctagagagac aaagaggaat cactattcag tcagcagcca cttacaccat gtggaaagat
 360
 gtcaatatta acattataga tactcctggg catgtggact tcacaataga agtggaaagg
 420
 gccctgagag tgttgatgg tgcagtcctt gttctctgtg ctgttgagg ggtacagtgc
 480
 cagaccatga ctgtcaatcg tcagatgaag cgtacaacg ttccgtttct aacttttatt
 540
 aacaaattgg accgaatggg ctccaacca gccagggccc tgcagcaaat gaggtctaaa
 600
 ctaaatacata atgcagcgtt tatgcagata cccatgggtt tggagggtaa ttttaaagg
 660
 attgtagat
 669

<210> 3592

<211> 223

<212> PRT

<213> Homo sapiens

<400> 3592

Xaa	Ala	Cys	Ser	Ala	Leu	Ala	Met	Arg	Leu	Leu	Gly	Ala	Ala	Ala	Val
1				5					10					15	
Ala	Ala	Leu	Gly	Arg	Gly	Arg	Ala	Pro	Ala	Ser	Leu	Gly	Trp	Gln	Arg
		20					25					30			
Lys	Gln	Val	Asn	Trp	Lys	Ala	Cys	Arg	Trp	Ser	Ser	Ser	Gly	Val	Ile
		35					40					45			
Pro	Asn	Glu	Lys	Ile	Arg	Asn	Ile	Gly	Ile	Ser	Ala	His	Ile	Asp	Ser
	50					55				60					
Gly	Lys	Thr	Thr	Leu	Thr	Glu	Arg	Val	Leu	Tyr	Tyr	Thr	Gly	Arg	Ile
65				70					75					80	
Ala	Lys	Met	His	Glu	Val	Lys	Gly	Lys	Asp	Gly	Val	Gly	Ala	Val	Met
			85					90					95		
Asp	Ser	Met	Glu	Leu	Glu	Arg	Gln	Arg	Gly	Ile	Thr	Ile	Gln	Ser	Ala
		100						105					110		
Ala	Thr	Tyr	Thr	Met	Trp	Lys	Asp	Val	Asn	Ile	Asn	Ile	Ile	Asp	Thr
		115					120					125			
Pro	Gly	His	Val	Asp	Phe	Thr	Ile	Glu	Val	Glu	Arg	Ala	Leu	Arg	Val
		130				135					140				
Leu	Asp	Gly	Ala	Val	Leu	Val	Leu	Cys	Ala	Val	Gly	Gly	Val	Gln	Cys
145					150				155					160	
Gln	Thr	Met	Thr	Val	Asn	Arg	Gln	Met	Lys	Arg	Tyr	Asn	Val	Pro	Phe
			165					170					175		
Leu	Thr	Phe	Ile	Asn	Lys	Leu	Asp	Arg	Met	Gly	Ser	Asn	Pro	Ala	Arg
		180						185					190		
Ala	Leu	Gln	Gln	Met	Arg	Ser	Lys	Leu	Asn	His	Asn	Ala	Ala	Phe	Met
		195					200					205			
Gln	Ile	Pro	Met	Gly	Leu	Glu	Gly	Asn	Phe	Lys	Gly	Ile	Val	Asp	
	210					215						220			

<210> 3593
 <211> 1005
 <212> DNA
 <213> Homo sapiens

<400> 3593
 gaacgaaaga tggcggcgcc cgtaaggcgg acgctgtag ggggtggcggg ggggtggcgg
 60
 cggttcgaga ggctctgggc cggcagtccta agctctcgca gcctggctct tgcagccgca
 120
 ccctcaagca acggatcccc atggcgcttg ttgggcgcgt tgtgacctga gcggccacct
 180
 gtagtctcca agccgttgac cccattgcag gaagagatgg cgtctctact gcagcagatt
 240
 gagatagaga gaagcctgta ttcagaccac gagcttcgtg ctctggatga aaaccagcga
 300
 ctggcaaaga agaaagctga ccttcgatga gaagaagatg aacaggatat attgctggcg
 360
 caagatttgg aagatatgtg ggagcagaaa tttctacagt tcaaacttgg agctcgcata
 420
 acagaagctg atgaaaagaa tgaccgaaca tccctgaaca ggaagctaga caggaaacct
 480
 gtctctgtag tcagagagaa gtttggagac caggatgttt ggatactgcc ccaggcagag
 540
 tggcagcctg gggagaccct tcgaggaaca gctgaacgaa ccctggccac actctcagaa
 600
 aacaacatgg aagccaagtt cctaggaat gcacctgtg ggcaactacac attcaagttc
 660
 cccaggcga tgcggacaga gagtaacctc ggagccaagg tgttcttctt caaagcactg
 720
 ctattaactg gagacttttc ccaggctggg aataagggcc atcatgtgtg ggtcactaag
 780
 gatgagctgg gtgactatgtt gaaacaaaaa tacctggccc aagttaggag gtttgtttca
 840
 gacctctgat gggccgagct gcctgtggac ggtgctcaga caagtctggg attagagcct
 900
 caaggacatt gtgtgattgc ctcacatttg caggtaatat caagcagcaa actaaattct
 960
 gagaaataaa cgagtctatt actgaaaaaa aaaaaaaaaa aaaaa
 1005

<210> 3594
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 3594
 Glu Arg Lys Met Ala Ala Pro Val Arg Arg Thr Leu Leu Gly Val Ala
 1 5 10 15
 Gly Gly Trp Arg Arg Phe Glu Arg Leu Trp Ala Gly Ser Leu Ser Ser
 20 25 30
 Arg Ser Leu Ala Leu Ala Ala Ala Pro Ser Ser Asn Gly Ser Pro Trp
 35 40 45
 Arg Leu Leu Gly Ala Leu Cys Leu Gln Arg Pro Pro Val Val Ser Lys

50		55		60	
Pro	Leu	Thr	Pro	Leu	Gln
65		70		75	80
Glu	Ile	Glu	Arg	Ser	Leu
		85		90	95
Glu	Asn	Gln	Arg	Leu	Ala
		100		105	110
Asp	Glu	Gln	Asp	Ile	Leu
		115		120	125
Gln	Lys	Phe	Leu	Gln	Phe
		130		135	140
Glu	Lys	Asn	Asp	Arg	Thr
145		150		155	160
Val	Leu	Leu	Val	Arg	Glu
		165		170	175
Pro	Gln	Ala	Glu	Trp	Gln
		180		185	190
Arg	Thr	Leu	Ala	Thr	Leu
		195		200	205
Gly	Asn	Ala	Pro	Cys	Gly
		210		215	220
Arg	Thr	Glu	Ser	Asn	Leu
225		230		235	240
Leu	Leu	Thr	Gly	Asp	Phe
		245		250	255
Trp	Val	Thr	Lys	Asp	Glu
		260		265	270
Ala	Gln	Val	Arg	Arg	Phe
		275		280	

<210> 3595

<211> 1903

<212> DNA

<213> Homo sapiens

<400> 3595

```

ttccagggtga cccggggggga ctacgcgccc atcctccaga aggtggtgga gcagctggag
60
aaagccaagg cctatgcagc caacagccac caggggcaga tgctggccca gtatatagag
120
agcttcaccc agggctccat cgaggccac aagaggggct cccgcttctg gatccaggac
180
aaaggcccca tcgtggagag ttacatcggt ttcacgaga gctaccgga cccctttggt
240
tcccaggagg aatttgaagg ttctgtagct gtggtgaaca aggccatgag tgccaagttt
300
gagcggctgg tggcgagcgc agagcagctg ctgaaggagc tgccctggcc cccaaccttt
360
gagaaggaca agttcctcac cctgacttc acctccctgg atgttctcac cttcgtgggc
420
tccggcatcc ctgccggcat caacatcccc aactacgatg atctgaggca gacggaaggc
480
tttaagaacg tgtcgctggg gaatgtgctg gctgtggcct acgccacgca gcgggagaag
540

```

cttacctttc tggaggagga tgacaaggac ctgtacatcc tctggaagg gcccctccttc
600
gatgtgcagg tgggcctgca cgagctgctg ggccatggca gtggcaagct ctctgtacag
660
gacgaaaaag gagcattcaa ctttgaccag gaaacagtga tcaaccaga gacgggagag
720
cagattcaga gctgggtatcg gagcggggag acctgggata gcaagttcag caccatcgcc
780
tccagctacg aagagtgccg ggctgagagc gtgggtctct acctctgtct ccacccgcaa
840
gtgctggaga tctttggctt tgagggggct gatgcggagg acgtgatcta cgtgaactgg
900
ctcaacatgg ttcggggccg gctgctcgct ctggagttct acacacctga ggcttcaac
960
tggcgacagg cccatattga gggccggtt gtgatcctga gactcttgct ggaggtggc
1020
gagggactcg ttaccatcac tcccaccaca ggctccgatg ggcgcccaga tgcccgggtc
1080
cgctctgacc gcagcaagat ccggtctgtg ggcaagcctg ctctagagcg ctctctgagg
1140
agacttcagg tgctgaagtc cacaggggat gtggccggag ggcgggccct gtacgagggg
1200
tatgcaacgg tcaactgatgc gccccccgag tgcttctca ccctcagga caggtgctg
1260
ctgcgtaagg aatctcgga gctcattgtt cagcccaaca ctgccttga aggtaatggc
1320
tcagagtgct agcttctgga atacgaggcg tcagctgctg gcctcatccg atccttctct
1380
gagcgtttcc cagaggatgg acccgagttg gaggagatcc tcacacagct ggccacagcc
1440
gatgcccgat tctggaaggg ccccgatgag gcccctctg gccaaagctt aggaagatgt
1500
gtggccttgc cccattcca tcagaccaag gctgcaagt gcccctccag tgtgtgtatt
1560
taggggtggg gagggggagg ggcaggagct tggaccttg tactacctca gctgagggg
1620
gtgnacaaa ccccttccat ttgtcagcac ttccagcct gccaatgtct tcccctctgt
1680
gatcatttca tctgcaactgc catacgtgga gtgagcaaga cagggttac catcctgtct
1740
accagatgag gaaatggcag ttctgagaag tcaactggct agatcccga ggtggcacgt
1800
gacagctagg gttcaaaacg ttctcaccaa atccaatgct cctcacatat taattttata
1860
accagacaaa taaatattag agacaaccac catcaaaaaa aaa
1903

<210> 3596

<211> 496

<212> PRT

<213> Homo sapiens

<400> 3596

Phe Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val

1	5	10	15
Glu Gln Leu	Glu Lys Ala	Lys Ala Tyr	Ala Ala Asn Ser His Gln Gly
	20	25	30
Gln Met Leu	Ala Gln Tyr	Ile Glu Ser	Phe Thr Gln Gly Ser Ile Glu
	35	40	45
Ala His Lys	Arg Gly Ser	Arg Phe Trp	Ile Gln Asp Lys Gly Pro Ile
	50	55	60
Val Glu Ser	Tyr Ile Gly	Phe Ile Glu	Ser Tyr Arg Asp Pro Phe Gly
65		70	75
Ser Arg Gly	Glu Phe Glu	Gly Phe Val	Ala Val Val Asn Lys Ala Met
	85	90	95
Ser Ala Lys	Phe Glu Arg	Leu Val Ala	Ser Ala Glu Gln Leu Leu Lys
	100	105	110
Glu Leu Pro	Trp Pro Pro	Thr Phe Glu	Lys Asp Lys Phe Leu Thr Pro
	115	120	125
Asp Phe Thr	Ser Leu Asp	Val Leu Thr	Phe Ala Gly Ser Gly Ile Pro
	130	135	140
Ala Gly Ile	Asn Ile Pro	Asn Tyr Asp	Asp Leu Arg Gln Thr Glu Gly
145		150	155
Phe Lys Asn	Val Ser Leu	Gly Asn Val	Leu Ala Val Ala Tyr Ala Thr
	165	170	175
Gln Arg Glu	Lys Leu Thr	Phe Leu Glu	Glu Asp Asp Lys Asp Leu Tyr
	180	185	190
Ile Leu Trp	Lys Gly Pro	Ser Phe Asp	Val Gln Val Gly Leu His Glu
	195	200	205
Leu Leu Gly	His Gly Ser	Gly Lys Leu	Phe Val Gln Asp Glu Lys Gly
	210	215	220
Ala Phe Asn	Phe Asp Gln	Glu Thr Val	Ile Asn Pro Glu Thr Gly Glu
225		230	235
Gln Ile Gln	Ser Trp Tyr	Arg Ser Gly	Glu Thr Trp Asp Ser Lys Phe
	245	250	255
Ser Thr Ile	Ala Ser Ser	Tyr Glu Glu	Cys Arg Ala Glu Ser Val Gly
	260	265	270
Leu Tyr Leu	Cys Leu His	Pro Gln Val	Leu Glu Ile Phe Gly Phe Glu
	275	280	285
Gly Ala Asp	Ala Glu Asp	Val Ile Tyr	Val Asn Trp Leu Asn Met Val
	290	295	300
Arg Ala Gly	Leu Leu Ala	Leu Glu Phe	Tyr Thr Pro Glu Ala Phe Asn
305		310	315
Trp Arg Gln	Ala His Met	Gln Ala Arg	Phe Val Ile Leu Arg Val Leu
	325	330	335
Leu Glu Ala	Gly Glu Gly	Leu Val Thr	Ile Thr Pro Thr Thr Gly Ser
	340	345	350
Asp Gly Arg	Pro Asp Ala	Arg Val Arg	Leu Asp Arg Ser Lys Ile Arg
	355	360	365
Ser Val Gly	Lys Pro Ala	Leu Glu Arg	Phe Leu Arg Arg Leu Gln Val
	370	375	380
Leu Lys Ser	Thr Gly Asp	Val Ala Gly	Gly Arg Ala Leu Tyr Glu Gly
385		390	395
Tyr Ala Thr	Val Thr Asp	Ala Pro Pro	Glu Cys Phe Leu Thr Leu Arg
	405	410	415
Asp Thr Val	Leu Leu Arg	Lys Glu Ser	Arg Lys Leu Ile Val Gln Pro
	420	425	430
Asn Thr Arg	Leu Glu Gly	Asn Gly Ser	Asp Val Gln Leu Leu Glu Tyr

	435		440		445												
Glu	Ala	Ser	Ala	Ala	Gly	Leu	Ile	Arg	Ser	Phe	Ser	Glu	Arg	Phe	Pro		
	450					455					460						
Glu	Asp	Gly	Pro	Glu	Leu	Glu	Glu	Ile	Leu	Thr	Gln	Leu	Ala	Thr	Ala		
465					470					475					480		
Asp	Ala	Arg	Phe	Trp	Lys	Gly	Pro	Ser	Glu	Ala	Pro	Ser	Gly	Gln	Ala		
				485				490						495			

<210> 3597

<211> 1090

<212> DNA

<213> Homo sapiens

<400> 3597

```

nccatggaag ggctggagga ggcagaggcc aactgctccg tggcgttcgc tgaggctcag
60
agatgggtgg aggcagtaac agagaagaat ttgaaacaa aagattttcg agcctctcta
120
gaaaatggtg ttctgctgtg tgatttgatt aataagctta aacctggcgt cattaagaag
180
atcaatagac tgtctacacc aatagcagga ttggataata taaacgtttt cttgaaagct
240
tgtgaacaga ttggattgaa agaagccag cttttccatc ctggagatct acaggattta
300
tcaaatcgag tcaactgtcaa gcaagaagag actgacagga gagtgaaaaa tgttttgata
360
acattgtact ggctgggaag aaaagcacia agcaaccctg actataatgg tccccatctt
420
aatgtgaaag cgtttgagaa tcttttagga caagcactga cgaaggcact cgaagactcc
480
agcttctctga aaagaagtgg cagggacagt ggctacggtg acatctggtg tctgaacgt
540
ggagaatttc ttgctctctc aaggcaccat aagagagaag attcctttga aagcttggac
600
tctttgggct cgaggtcatt gacaagctgc tcctctgata tcacgttgag aggggggcgt
660
gaagggtttg aaagtgcac agattcggaa ttacattca agatgcagga ttataataaa
720
gatgatgtgt cgtatcgaag gatttcggct gttgagccaa agactgcgtt acccttcaat
780
cgttttttac ccaacaaaag tagacagcca tcctatgtac cagcacctct gagaaagaaa
840
aagccagaca aacatgagga taacagaaga agttgggcaa gcccggttta tacagaagca
900
gatggaacat tttcaaggag taagtccatg agtgatgtca ggcgagaaga tggtcaaaac
960
ttgcgtcagc tgcgttacga ggagatgcag aaaataaaat cacaattaaa agaacaagat
1020
cagaaatggc aggatgacct tgcaaaatgg aaagatcgtc gaaaaagtta cacttcagat
1080
ctgcagaaga
1090

```

<210> 3598

<211> 159
 <212> PRT
 <213> Homo sapiens

<400> 3598
 Arg Ser Leu Thr Ser Cys Ser Ser Asp Ile Thr Leu Arg Gly Gly Arg
 1 5 10 15
 Glu Gly Phe Glu Ser Asp Thr Asp Ser Glu Phe Thr Phe Lys Met Gln
 20 25 30
 Asp Tyr Asn Lys Asp Asp Met Ser Tyr Arg Arg Ile Ser Ala Val Glu
 35 40 45
 Pro Lys Thr Ala Leu Pro Phe Asn Arg Phe Leu Pro Asn Lys Ser Arg
 50 55 60
 Gln Pro Ser Tyr Val Pro Ala Pro Leu Arg Lys Lys Lys Pro Asp Lys
 65 70 75 80
 His Glu Asp Asn Arg Arg Ser Trp Ala Ser Pro Val Tyr Thr Glu Ala
 85 90 95
 Asp Gly Thr Phe Ser Arg Ser Lys Ser Met Ser Asp Val Ser Ala Glu
 100 105 110
 Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile
 115 120 125
 Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala
 130 135 140
 Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys
 145 150 155

<210> 3599
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 3599
 gtgcacatcc tcatgggctc ctgttacaag accaaaaaat tcctgctctc cctggcagaa
 60
 aacaagctgg gtccctgcat gtccttgga ctgaggggga accagaccat ggtggaggta
 120
 aggagctggt cggggctcct ggtgggggtg ctggctcccc gtcccttgct cgtgccgata
 180
 gagcatctgc tgggagccaa gaactgctgc aggcacgggg ggccagtgggt gaggcgtgca
 240
 gtcccagccg tcctgagctt agtgggagcc tcgagccttc atcatgcagt gtatttgttt
 300
 ctgttgtgat ccagctgata cattgatcag tggggttggg gacgcttctg ttctgctcat
 360
 ttattgctgt gtaacaaacc acctetaagt gagggcttta aaacaagatc gttcatttct
 420
 tttgcacatg ggcattgggg tacctgggag cagctacgca cttctcacct ggggcctcat
 480
 cagtcagatg gggccagggt gggttagccc caaggcttct cgcattggcc taagaggcct
 540
 cagacaatga gggctttggc ggctggggct cccagcgcac acccttcacc tcgtggcctc
 600
 caggtagcct gtccacctgc caagaacaca cacaccagc cccacaggtc acccctcacc
 660

tgctgctgct cctctctctc cctgcacgct t
691

<210> 3600

<211> 98

<212> PRT

<213> Homo sapiens

<400> 3600

Met	Gly	Ser	Cys	Tyr	Lys	Thr	Lys	Lys	Phe	Leu	Leu	Ser	Leu	Ala	Glu
1				5					10					15	
Asn	Lys	Leu	Gly	Pro	Cys	Met	Leu	Leu	Ala	Leu	Arg	Gly	Asn	Gln	Thr
			20						25					30	
Met	Val	Glu	Val	Arg	Ser	Trp	Ser	Gly	Ser	Leu	Val	Gly	Trp	Leu	Ala
		35						40					45		
Pro	Arg	Pro	Leu	Ser	Val	Pro	Ile	Glu	His	Leu	Leu	Gly	Ala	Lys	Asn
		50					55					60			
Cys	Cys	Arg	His	Gly	Gly	Gln	Trp	Val	Arg	Arg	Ala	Val	Pro	Ala	Val
65					70					75				80	
Leu	Ser	Leu	Val	Gly	Ala	Ser	Ser	Leu	His	His	Ala	Val	Tyr	Leu	Phe
				85					90					95	
Leu	Leu														

<210> 3601

<211> 2963

<212> DNA

<213> Homo sapiens

<400> 3601

cgatcctccc acctcagcct cccaaagggc tgagattaca ggtgtgagcc cccgaatccg
60
gtgtgcactg ctgtttactt agtatctttc tttaactaga tttattttta aacaaggctt
120
tgtccaagga catttggtc gcaggcacag agctgattaa ctcgttatgt atcttttgat
180
aataaggcag cgatcattaa gaaaaacgtg tagccaatga aataacatgt tctgggcccc
240
accactggac tgggagggtgc agcgcaccca agcagaggct gcctcctgcc ctccacgcct
300
gctgctctcg caggcagggg ctctgctgct tacagcagtg cggccatctc ggcttctctc
360
cacatcgtct gtcacgcgct ggtccccacc atacctctcg ccaccccgct cctctgtccc
420
cgtgcggcct gaggagctcc agctttccct gccagcgggtg ctctgggagt ggggacgtga
480
tgcagggcga gcatgatgca acggggcacc ccagaccctt ccctcccgct gggggagggg
540
tgtggcacgc agaggggcag agggcgggga cactggcccc gtgggggaag aaggtgctgt
600
cacagccggt actgtccccc gtgggacccc agcctggagc cccccatcct ttggctcctg
660
cctgtggcca ctcagetctc aggtggccac atgcacatcc cctgctcctt ccctgcgcac
720

ctgccctgcc cagtggcctt tctgggtccca gctactgaaa ccggtgagct gctccagggg
780
gaggctgett tctggctcct ggtgtatttg gacacagata ggcccttagt gtccagaggc
840
gccccatgca gccctcatgg tcagcaggac acccaggata gacccccctc acgcagcacc
900
tgggccctgg gagcggctgc ttttaggatg ccacctgttc ctggggcgct tgtttttagc
960
ttctgacctg aagatgagcg ggggagcgcg gtggcgaggg cacgtgggcg tggctcacgg
1020
tctcctctct gtggcaggta catgtcccag agcaagcaca cggaggcccg ggagctcatg
1080
tactcgggag ccctgctctt cttcagccat ggccagcaaa acagtgcagc agacttgtcc
1140
atgctgggtc tggagtccct ggagaaggcg gaagtggagg tggctgacga gctgctggaa
1200
aatctggcta aagtgttcag cctgatggac cccaactctc ctgagcgctg gacctttgtg
1260
tccagagccc tgaagtggtc cagtgggggc tccgggaagc tgggccaccc ccggtgcac
1320
cagctgctgg ccctcaccct gtggaaagaa caaaactatt gtgagtcgag gtatcatttt
1380
ctgcactcag cggacgggga gggctgtgcc aacatgctgg tggagtattc cacgtcccg
1440
ggcttccgca gcgaggtgga catgttcgtg gccaggccg tgctacagtt tctctgttta
1500
aaaaacaaaa gtagcgcatc ggtggtcttc acgacgtaca cccagaagca cccgtccatc
1560
gaggacgggc ctccgtttgt ggagccgctg cttaacttca tctggttcct gctgctggct
1620
gtggacggtg ggaagctgac ggtgttcact gtgctgtgtg agcagtacca gccatccctc
1680
cggcgggacc ccatgtacaa cgagtacctc gaccgcatag gacagctgtt cttcggcgct
1740
ccgcccaagc agacgtcttc ctacgggggc ctgctcggga accttctgac cagcctcatg
1800
ggctcctcag agcaggagga tggggaggag agccccagcg acggcagccc catcgagctg
1860
gactgaactg gccaggccac gtggagacac cacggtcgac gacggctgga gggacgtttc
1920
agaggcgagt cctgggtggc tcctcgctt gggggctcct ggccctgagg ctggcggtgg
1980
ccgcatgccg gcgctgtct gtttctgtgc ggcggtcag ggtggcgcg ctgctgctca
2040
ctgtgctgct gggacccaag agtggggcgt cggccctgct ggccgcccgcg tccccgaga
2100
ttgaccaca ataaagcaca ggccctaccg cggcgtcacc ctctcccact cctttgttct
2160
gggtcctttc gggagggctg atgggcagca caggaggccc gtcctcgggg ggctgcgcac
2220
atcacgctcc ttgcggggc tccggcacag ctgcggtcac caaagcaggt gctggccctc
2280
ggacctgaga gccagccag ggcccatgtg gtctgcaaat gggagcggt gtttttgaac
2340

acgggggtcat tctgcagtcg ggacgaaccg gtccccgtcg cagacggagt gcacgtgccc
 2400
 tgcgccacat cctcacgctc ggtggagggg cgcgtgcggc gggacgggtg ctacgggtac
 2460
 ttgcagctgt gtcccatgtg gcatcccaga gctgcgcctt gctggtctct gtgagcgcca
 2520
 cgctgctgtg ctggaaatgc cgctttaaaa agggataccg tgggactctg cccgtctctt
 2580
 tcataacgca atatttatatt gtattgggtg acgattgatt ctttcgacct aacattttgg
 2640
 gttttaacca aataaccggt ccaggagtga gcagctccgt tctgtcagat gctactccaa
 2700
 atgttaccag aacgatgaca aaaggggaga cgctctatatt tttcacagtt aaatgacagt
 2760
 tgtagattga tacgcagttg tgcattggaa ggggaaacgc acagctttat ttactgtaaa
 2820
 gtggaatttc aggaaggctt gtgtgaaccg ttgcgcataa ataaaccctt tctaccgggc
 2880
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2940
 aaaaaaaaaa aaaaaaaaaa aaa
 2963

<210> 3602

<211> 299

<212> PRT

<213> Homo sapiens

<400> 3602

Pro	Glu	Asp	Glu	Arg	Gly	Ser	Ala	Val	Ala	Arg	Ala	Arg	Gly	Arg	Gly
1			5					10					15		
Ser	Arg	Ser	Pro	Leu	Cys	Gly	Arg	Tyr	Met	Ser	Gln	Ser	Lys	His	Thr
			20					25					30		
Glu	Ala	Arg	Glu	Leu	Met	Tyr	Ser	Gly	Ala	Leu	Leu	Phe	Phe	Ser	His
			35					40					45		
Gly	Gln	Gln	Asn	Ser	Ala	Ala	Asp	Leu	Ser	Met	Leu	Val	Leu	Glu	Ser
			50				55				60				
Leu	Glu	Lys	Ala	Glu	Val	Glu	Val	Ala	Asp	Glu	Leu	Leu	Glu	Asn	Leu
65					70					75					80
Ala	Lys	Val	Phe	Ser	Leu	Met	Asp	Pro	Asn	Ser	Pro	Glu	Arg	Val	Thr
					85					90					95
Phe	Val	Ser	Arg	Ala	Leu	Lys	Trp	Ser	Ser	Gly	Gly	Ser	Gly	Lys	Leu
			100					105						110	
Gly	His	Pro	Arg	Leu	His	Gln	Leu	Leu	Ala	Leu	Thr	Leu	Trp	Lys	Glu
			115				120					125			
Gln	Asn	Tyr	Cys	Glu	Ser	Arg	Tyr	His	Phe	Leu	His	Ser	Ala	Asp	Gly
			130				135					140			
Glu	Gly	Cys	Ala	Asn	Met	Leu	Val	Glu	Tyr	Ser	Thr	Ser	Arg	Gly	Phe
145					150					155					160
Arg	Ser	Glu	Val	Asp	Met	Phe	Val	Ala	Gln	Ala	Val	Leu	Gln	Phe	Leu
					165					170					175
Cys	Leu	Lys	Asn	Lys	Ser	Ser	Ala	Ser	Val	Val	Phe	Thr	Thr	Tyr	Thr
			180					185					190		
Gln	Lys	His	Pro	Ser	Ile	Glu	Asp	Gly	Pro	Pro	Phe	Val	Glu	Pro	Leu

195 200 205
 Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Gly Lys Leu
 210 215 220
 Thr Val Phe Thr Val Leu Cys Glu Gln Tyr Gln Pro Ser Leu Arg Arg
 225 230 235 240
 Asp Pro Met Tyr Asn Glu Tyr Leu Asp Arg Ile Gly Gln Leu Phe Phe
 245 250 255
 Gly Val Pro Pro Lys Gln Thr Ser Ser Tyr Gly Gly Leu Leu Gly Asn
 260 265 270
 Leu Leu Thr Ser Leu Met Gly Ser Ser Glu Gln Glu Asp Gly Glu Glu
 275 280 285
 Ser Pro Ser Asp Gly Ser Pro Ile Glu Leu Asp
 290 295

<210> 3603

<211> 1082

<212> DNA

<213> Homo sapiens

<400> 3603

nnagctcctg cggaaccgat ctcaagcaca aggacaagca ggaaaacggc gagaggactg
 60
 gaggggtgcc tctgatcaaa gcccacaaga gagaaacacc agatgaaaat ggtaaaaccc
 120
 agagagccga tgatttttaa atgtgtgttt gtgggtgaaa tggctgcgca ggtcggagcg
 180
 gtgcgcgtag tacgggcggt ggcggcgag gaggagccgg acaaagaggg gaaggagaaa
 240
 cctcatgctg ggggtctccc gcggggagtt aaacggcagc gccgatctag cagtgggggg
 300
 tctcaggaga agcggggggc gccgagccag gagccccctc tcgctcccc tcaccggcgg
 360
 cgtcgcagcc gccaacatcc tgggcccgtg ccgccaacga atgcagcccc aactgtccca
 420
 ggccctgttg agcctcttct cctgccgcct ccgcccac cttcgttgge acccgccggg
 480
 cccgctgtcg ctgccccctc cccggcccca agcaccggc cctcttcacc ttctcgctc
 540
 tgacggtgag cgcggccggg cccaagcata agggccacaa ggagcggcac aagcaccatc
 600
 accaccgagg ccccgatggt gatccagct cctgcggaac cgatctcaag cacaaggaca
 660
 agcaggaaaa cggcgagagg actggagggg tgcctctgat caaagcccc aagagagaaa
 720
 caccgatga aaatggtaaa acccagagag ccgatgattt tgtcttgaag aaaataaaga
 780
 agaaaaagaa aaagaaacac cgagaagaca tgcgaggaag acgccttaaa atgtacaata
 840
 aggaagtaca aaccgtctgt gctggcctga cccgcacag taaagaaatt ctacccaag
 900
 gacaaataaa tagcacttca ggacttaata aggagtcctt caggatatctg aaagatgaac
 960
 agctgtgccg attaaatttg ggtatgcaag aatatcgggt accccaggga gtacaaacac
 1020

cttttatgac tcaccaggaa cattctattc gtagaaatctt cttaaaaaaca ggtactaaat
 1080
 tt
 1082

<210> 3604

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3604

Met Lys Met Val Lys Pro Arg Glu Pro Met Ile Phe Lys Cys Val Phe
 1 5 10 15
 Val Gly Glu Met Ala Ala Gln Val Gly Ala Val Arg Val Val Arg Ala
 20 25 30
 Val Ala Ala Gln Glu Glu Pro Asp Lys Glu Gly Lys Glu Lys Pro His
 35 40 45
 Ala Gly Val Ser Pro Arg Gly Val Lys Arg Gln Arg Arg Ser Ser Ser
 50 55 60
 Gly Gly Ser Gln Glu Lys Arg Gly Arg Pro Ser Gln Glu Pro Pro Leu
 65 70 75 80
 Ala Pro Pro His Arg Arg Arg Ser Arg Gln His Pro Gly Pro Leu
 85 90 95
 Pro Pro Thr Asn Ala Ala Pro Thr Val Pro Gly Pro Val Glu Pro Leu
 100 105 110
 Leu Leu Pro Pro Pro Pro Pro Pro Ser Leu Ala Pro Ala Gly Pro Ala
 115 120 125
 Val Ala Ala Pro Leu Pro Ala Pro Ser Thr Arg Pro Ser Ser Pro Ser
 130 135 140
 Arg Leu
 145

<210> 3605

<211> 2004

<212> DNA

<213> Homo sapiens

<400> 3605

nggcggcggc gatggccgag caggagggcg cccgcaacgg cggcccaacc gcggggcgctc
 60
 cagcgtgtgg agggcaagct gcgcgccagc gtcgagaagg gcgactacta cgaggcgac
 120
 cagatgtacc ggaccctgtt ctccaggtac atgtcccaga gcaagcacac ggaggcccg
 180
 gagctcatgt actcgggagc cctgctcttc ttcagccatg gccagcaaaa cagtgcagca
 240
 gacttgteca tgctggtcct ggagtcctcg gagaaggcgg aagtggaggt ggctgacgag
 300
 ctgctggaaa atctggctaa agtgttcagc ctgatggacc ccaactctcc tgagcgcgtg
 360
 acctttgtgt ccagagccct gaagtgtcc agtgggggct ccgggaagct gggccacccc
 420
 cggctgcacc agctgctggc cctcaccctg tggaaagaac aaaactattg tgagtcgagg
 480

tatcattttc tgcactcagc ggacggggag ggctgtgcca acatgctggt ggagtattcc
540
acgtcccgcg gcttccgcag cgagggtggac atgttcgtgg ctcaggccgt gctacagttt
600
ctctgtttta aaaacaaaag tagcgcatcg gtggtcttca cgacgtacac ccagaagcac
660
ccgtccatcg aggacgggcc tccgtttgtg gagccgctgc ttaacttcat ctggttcctg
720
ctgctggctg tggacggtgg gaagctgacg gtgttctactg tgctgtgtga gcagtaccag
780
ccatccctcc ggcggggaccc catgtacaac gactacctcg accgcatagg acagctgttc
840
ttcggcgctc cgcccaagca gacgtcttcc tacggggggc tgctcgggaa ccttctgacc
900
agcctcatgg gtcctcaga gcaggaggat ggggaggaga gcccagcga cggcagcccc
960
atcgagctgg actgaactgg ccaggccacg tggagacacc acggtcgacg acggtctggag
1020
ggacgtttca gaggcgagtc ctgggtggct cctcgcttg ggggctcctg gccctgaggg
1080
tggcggtggc cgcattgccg cgcgtgtctg tttctgtcgc gcggtcagg gtggcgcggc
1140
tgctgtcac tgtgtgtg ggacccaaga gtggggcgtc gccctgtctg gccgcccgt
1200
cccccgagat tgaccacaa taaagcacag gccttaccgc gggtcaccc tctcccaactc
1260
ctttgttctg ggtcctttcg ggagggtga tgggcagcac aggaggcccg tctcggggg
1320
gctgcgcaca tcacgtcct tgccggggt cggcacagc tgcggtcac aaagcagggtg
1380
ctggccctcg gacctgagag cccagccagg gcccatgtgg tctgcaaatg ggagcggtg
1440
tttttgaaca cggggtcatt ctgcagtcag gacgaaccgg tcccgtcgc agacggagt
1500
cacgtgccct gcgccacac ctcacgctcg gtggaggagc gcgtgcggcg ggacggtgcc
1560
tacgggtact tgcagctgtg tcccatgtgg catcccagag ctgcgccctg ctggtctctg
1620
tgagcgccac gctgctgtgc tggaaatgcc gctttaaaaa gggataccgt gggactctgc
1680
ccgtctcttt cataacgcaa tatttatttg tattgggtga cgattgattc tttcgacct
1740
acattttggg ttttaaccaa ataaccggtc caggagtga cagctccgtt ctgtcagatg
1800
ctactccaaa tgttaccaga acgatgacaa aaggggagac gctctatttt ttcacagtta
1860
aatgacagtt gtagattgat acgcagttgt gcatgggaag gggaaacgca cagctttatt
1920
tactgtaaag tggaatttca ggaaggcttg tgtgaaccgt tgccgataaa taaacccttt
1980
ctaccgggca aaaaaaaaaa aaaa
2004

<210> 3606

<211> 324
 <212> PRT
 <213> Homo sapiens

<400> 3606

```

Xaa Arg Arg Arg Trp Pro Ser Arg Arg Ala Pro Ala Thr Ala Ala Gln
 1           5           10           15
Pro Arg Gly Val Gln Arg Val Glu Gly Lys Leu Arg Ala Ser Val Glu
      20           25           30
Lys Gly Asp Tyr Tyr Glu Ala His Gln Met Tyr Arg Thr Leu Phe Phe
      35           40           45
Arg Tyr Met Ser Gln Ser Lys His Thr Glu Ala Arg Glu Leu Met Tyr
      50           55           60
Ser Gly Ala Leu Leu Phe Phe Ser His Gly Gln Gln Asn Ser Ala Ala
65           70           75           80
Asp Leu Ser Met Leu Val Leu Glu Ser Leu Glu Lys Ala Glu Val Glu
      85           90           95
Val Ala Asp Glu Leu Leu Glu Asn Leu Ala Lys Val Phe Ser Leu Met
      100          105          110
Asp Pro Asn Ser Pro Glu Arg Val Thr Phe Val Ser Arg Ala Leu Lys
      115          120          125
Trp Ser Ser Gly Gly Ser Gly Lys Leu Gly His Pro Arg Leu His Gln
      130          135          140
Leu Leu Ala Leu Thr Leu Trp Lys Glu Gln Asn Tyr Cys Glu Ser Arg
145          150          155          160
Tyr His Phe Leu His Ser Ala Asp Gly Glu Gly Cys Ala Asn Met Leu
      165          170          175
Val Glu Tyr Ser Thr Ser Arg Gly Phe Arg Ser Glu Val Asp Met Phe
      180          185          190
Val Ala Gln Ala Val Leu Gln Phe Leu Cys Leu Lys Asn Lys Ser Ser
      195          200          205
Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro Ser Ile Glu
      210          215          220
Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile Trp Phe Leu
225          230          235          240
Leu Leu Ala Val Asp Gly Gly Lys Leu Thr Val Phe Thr Val Leu Cys
      245          250          255
Glu Gln Tyr Gln Pro Ser Leu Arg Arg Asp Pro Met Tyr Asn Glu Tyr
      260          265          270
Leu Asp Arg Ile Gly Gln Leu Phe Phe Gly Val Pro Pro Lys Gln Thr
      275          280          285
Ser Ser Tyr Gly Gly Leu Leu Gly Asn Leu Leu Thr Ser Leu Met Gly
      290          295          300
Ser Ser Glu Gln Glu Asp Gly Glu Glu Ser Pro Ser Asp Gly Ser Pro
305          310          315          320
Ile Glu Leu Asp

```

<210> 3607
 <211> 1726
 <212> DNA
 <213> Homo sapiens

<400> 3607

nacgcgtcgt gggagttggt ggaccccaca cgggacttgc aggcactggt tgttcagttt
60
aacgaccaat tcttctgggg ccagctggag gccgtcgagg tgaagtggag cgtgcgaatg
120
accctgtgtg ctgggatatg cagctatgaa ggggaaggggtg gaatgtgttc catccgtctc
180
agcgaacccc ttttgaagtt gaggccaaga aaggatcttg tagagaccct cctgcatgaa
240
atgatacatg cctatatttatt tgtcactaat aacgacaaag accgagaagg gcatgggtcca
300
gaatttttga aacatatgca tcgcatcaac agcctgactg gagccaatat aacggtatac
360
catacttttc acgatgaggt ggatgagtat cggcgacact ggtggcgctg caatgggccg
420
tgccagcaca ggccaccgta ttacggctat gtcaaacgag ctactaacag ggaaccctct
480
gctcatgact attggtgggc tgagcaccag aaaacctgtg gaggcactta cataaaaatc
540
aaggaaccag agaattactc aaaaaaaggc aaaggaaagg caaaactagg aaaggaacca
600
gtattggccg cagagaataa agataaaccc aacagaggtg aggccagct agtaatccct
660
tttagtggga aaggatatgt tctaggagaa acaagcaatt taccttcacc tgggaaactg
720
atcacttcac atgccattaa taaaacccaa gatcttttaa atcaaaacca ttcagcaaat
780
gctgtaagac ctaattctaa aatcaaggtg aaatttgaac agaatgggtc aagtaaaaat
840
tctcatctgg tctcccctgc tgtagtaac agtcaccaa atgttctaag caactacttt
900
cctagagtat catttgccaa ccaaaaggct ttcagaggtg tgaatggatc tccaaggata
960
agtgtaacag ttggcaacat ccctaaaaac tcagtctctt ctagtcttca gagaaggggt
1020
tcactttcta agatatecct aagaaattct tcaaaaagtaa cggaatcagc atctgtgatg
1080
ccatcccagg atgtgagtggt gtctgaagat acattcccaa ataaacgacc taggctagaa
1140
gataagactg tttttgacaa tttttttatc aagaaagagc aaataaaaag cagtggtaat
1200
gatccaaagt atagtacaac cacagctcag aattccagca gttcatccag tcagagcaaa
1260
atgggttaatt gccagtttg tcagaatgaa gttctgggag tctcagatta atgagcactt
1320
ggactgggtc cttgaagggtg acagcatcaa agtcaaaagc gaagaaagtc tttgaaaaag
1380
gtttcaaagt ctcaagtacc acctgtatta tctcactaat gtgctatgtc agccagtcag
1440
gaagttcttg ttaatactaa gattttaggt ttataatcta gttcacataa ccaatagaaa
1500
gtgtcctatt ttatatatac gcataataa ttgtaatttt aagatgtttt gtgtctcagg
1560
gtgctacatt cactcttgcc ttaggatatac tgtaaccag gttctgcctg tcgtgtataa
1620

tttttagata cttttgttct ttcttgctct taaggatttt aaaaacctgt taatcttttt
 1680
 atttgtatac ttctctaaaa atattcatat ggggaatcct gtcaaa
 1726

<210> 3608

<211> 436

<212> PRT

<213> Homo sapiens

<400> 3608

Xaa	Ala	Ser	Trp	Glu	Leu	Val	Asp	Pro	Thr	Pro	Asp	Leu	Gln	Ala	Leu
1				5					10				15		
Phe	Val	Gln	Phe	Asn	Asp	Gln	Phe	Phe	Trp	Gly	Gln	Leu	Glu	Ala	Val
		20						25					30		
Glu	Val	Lys	Trp	Ser	Val	Arg	Met	Thr	Leu	Cys	Ala	Gly	Ile	Cys	Ser
		35					40					45			
Tyr	Glu	Gly	Lys	Gly	Gly	Met	Cys	Ser	Ile	Arg	Leu	Ser	Glu	Pro	Leu
	50					55					60				
Leu	Lys	Leu	Arg	Pro	Arg	Lys	Asp	Leu	Val	Glu	Thr	Leu	Leu	His	Glu
65					70					75				80	
Met	Ile	His	Ala	Tyr	Leu	Phe	Val	Thr	Asn	Asp	Lys	Asp	Arg	Glu	
			85						90				95		
Gly	His	Gly	Pro	Glu	Phe	Cys	Lys	His	Met	His	Arg	Ile	Asn	Ser	Leu
			100					105					110		
Thr	Gly	Ala	Asn	Ile	Thr	Val	Tyr	His	Thr	Phe	His	Asp	Glu	Val	Asp
		115					120					125			
Glu	Tyr	Arg	Arg	His	Trp	Trp	Arg	Cys	Asn	Gly	Pro	Cys	Gln	His	Arg
	130					135					140				
Pro	Pro	Tyr	Tyr	Gly	Tyr	Val	Lys	Arg	Ala	Thr	Asn	Arg	Glu	Pro	Ser
145						150				155				160	
Ala	His	Asp	Tyr	Trp	Trp	Ala	Glu	His	Gln	Lys	Thr	Cys	Gly	Gly	Thr
			165						170				175		
Tyr	Ile	Lys	Ile	Lys	Glu	Pro	Glu	Asn	Tyr	Ser	Lys	Lys	Gly	Lys	Gly
		180						185					190		
Lys	Ala	Lys	Leu	Gly	Lys	Glu	Pro	Val	Leu	Ala	Ala	Glu	Asn	Lys	Asp
		195					200					205			
Lys	Pro	Asn	Arg	Gly	Glu	Ala	Gln	Leu	Val	Ile	Pro	Phe	Ser	Gly	Lys
	210					215					220				
Gly	Tyr	Val	Leu	Gly	Glu	Thr	Ser	Asn	Leu	Pro	Ser	Pro	Gly	Lys	Leu
225					230					235				240	
Ile	Thr	Ser	His	Ala	Ile	Asn	Lys	Thr	Gln	Asp	Leu	Leu	Asn	Gln	Asn
			245						250				255		
His	Ser	Ala	Asn	Ala	Val	Arg	Pro	Asn	Ser	Lys	Ile	Lys	Val	Lys	Phe
		260						265				270			
Glu	Gln	Asn	Gly	Ser	Ser	Lys	Asn	Ser	His	Leu	Val	Ser	Pro	Ala	Val
		275					280					285			
Ser	Asn	Ser	His	Gln	Asn	Val	Leu	Ser	Asn	Tyr	Phe	Pro	Arg	Val	Ser
	290					295					300				
Phe	Ala	Asn	Gln	Lys	Ala	Phe	Arg	Gly	Val	Asn	Gly	Ser	Pro	Arg	Ile
305					310					315				320	
Ser	Val	Thr	Val	Gly	Asn	Ile	Pro	Lys	Asn	Ser	Val	Ser	Ser	Ser	Ser
			325						330				335		
Gln	Arg	Arg	Val	Ser	Ser	Ser	Lys	Ile	Ser	Leu	Arg	Asn	Ser	Ser	Lys

```

          340          345          350
Val Thr Glu Ser Ala Ser Val Met Pro Ser Gln Asp Val Ser Gly Ser
          355          360          365
Glu Asp Thr Phe Pro Asn Lys Arg Pro Arg Leu Glu Asp Lys Thr Val
          370          375          380
Phe Asp Asn Phe Phe Ile Lys Lys Glu Gln Ile Lys Ser Ser Gly Asn
385          390          395          400
Asp Pro Lys Tyr Ser Thr Thr Thr Ala Gln Asn Ser Ser Ser Ser Ser
          405          410          415
Ser Gln Ser Lys Met Val Asn Cys Pro Val Cys Gln Asn Glu Val Leu
          420          425          430
Gly Val Ser Asp
          435

<210> 3609
<211> 1286
<212> DNA
<213> Homo sapiens

<400> 3609
ntcttgcaact taagttgccc ttgaagatgg ttntgccttg ggccctggaac cccgagggag
60
ttcagcttca ccaaatacat ccaagctttc cgtgcaactga gagacatgct ggccgtggcc
120
tgcgtcaacc agtgggagca gctgaggggg ccgggtggca acgaggatgg gccacagaag
180
ctggacttgg aagctgatgc tgagcccaaa gacctcgaga gtacgaacct cttggagagt
240
gaagctccca gggactatct cctcaagttt gcctatatgt tggatttgga cagcgacaca
300
gcagacaagt tcctgcagct gntttggaac caaagggtgc aagaggggtgc tgtgtcctat
360
caannctacc ccttgtcgcc caccgccttc acccattgtg agcaggtgct gggcgagggg
420
gccctggacc gaggcaccta ctactgggag gtggagatta tcgagggctg ggtcagcatg
480
ggggtcatgg ccgcagactt ctccccacaa gagccctacg accgcggccg gctgggcccg
540
aacgcccact cctgctgcct gcagtggaat ggacgcagct tctccgtctg gtttcatggg
600
ctggaggctc cctgcecca ccccttctcg cccacgggtg gggctctgct ggaatacgct
660
gaccgtgctt tggcctteta tgetgtacgg gacggcaaga tgagcctcct gcggaggctg
720
aaggcctccc ggccccgcgg gggaggcatc ccggcctccc ccattgacct cttccagagc
780
cgccctggaca gtcactttgc ggggctcttc acccacagac tcaagcctgc cttcttctg
840
gagagtgtgg acgcccactt gcagatcggg cccctcaaga agtcctgcat atccgtgctg
900
aagaggaggt gatgcggggc acggggcgctc ctgtgtccgt ctctgtctca ggaagctgcc
960
tcctctgggc cctctccttc gtctgggaag gcaccagcat gagtcccaca caccagcct
1020

```

tctcatttct agaggettcc acctttttat acactcagcc ttccctctcc caggcaggag
 1080
 gacccccaga cctgttccc ctgcagacct cacttctggg agacagagct acagctggga
 1140
 cagctccaag ctaccctaac ccttccttcc ccagggtttct agaatagtgt ctggcatgta
 1200
 gtagatgctc aataaacact tgctcagggg cccgatctgc aagtgggggc cgtcgaccgg
 1260
 ccgctaattt agtagtagta gtaggc
 1286

<210> 3610

<211> 268

<212> PRT

<213> Homo sapiens

<400> 3610

Met	Leu	Ala	Val	Ala	Cys	Val	Asn	Gln	Trp	Glu	Gln	Leu	Arg	Gly	Pro
1				5					10					15	
Gly	Gly	Asn	Glu	Asp	Gly	Pro	Gln	Lys	Leu	Asp	Leu	Glu	Ala	Asp	Ala
		20						25					30		
Glu	Pro	Gln	Asp	Leu	Glu	Ser	Thr	Asn	Leu	Leu	Glu	Ser	Glu	Ala	Pro
		35					40					45			
Arg	Asp	Tyr	Phe	Leu	Lys	Phe	Ala	Tyr	Ile	Val	Asp	Leu	Asp	Ser	Asp
	50					55					60				
Thr	Ala	Asp	Lys	Phe	Leu	Gln	Leu	Xaa	Trp	Asn	Gln	Arg	Cys	Gln	Glu
65					70					75				80	
Gly	Ala	Val	Ser	Tyr	Gln	Xaa	Tyr	Pro	Leu	Ser	Pro	Thr	Arg	Phe	Thr
				85					90					95	
His	Cys	Glu	Gln	Val	Leu	Gly	Glu	Gly	Ala	Leu	Asp	Arg	Gly	Thr	Tyr
			100					105					110		
Tyr	Trp	Glu	Val	Glu	Ile	Ile	Glu	Gly	Trp	Val	Ser	Met	Gly	Val	Met
	115						120					125			
Ala	Ala	Asp	Phe	Ser	Pro	Gln	Glu	Pro	Tyr	Asp	Arg	Gly	Arg	Leu	Gly
	130					135					140				
Arg	Asn	Ala	His	Ser	Cys	Cys	Leu	Gln	Trp	Asn	Gly	Arg	Ser	Phe	Ser
145					150					155				160	
Val	Trp	Phe	His	Gly	Leu	Glu	Ala	Pro	Leu	Pro	His	Pro	Phe	Ser	Pro
				165					170					175	
Thr	Val	Gly	Val	Cys	Leu	Glu	Tyr	Ala	Asp	Arg	Ala	Leu	Ala	Phe	Tyr
		180						185					190		
Ala	Val	Arg	Asp	Gly	Lys	Met	Ser	Leu	Leu	Arg	Arg	Leu	Lys	Ala	Ser
	195						200					205			
Arg	Pro	Arg	Arg	Gly	Gly	Ile	Pro	Ala	Ser	Pro	Ile	Asp	Pro	Phe	Gln
	210				215						220				
Ser	Arg	Leu	Asp	Ser	His	Phe	Ala	Gly	Leu	Phe	Thr	His	Arg	Leu	Lys
225					230					235				240	
Pro	Ala	Phe	Phe	Leu	Glu	Ser	Val	Asp	Ala	His	Leu	Gln	Ile	Gly	Pro
				245					250					255	
Leu	Lys	Lys	Ser	Cys	Ile	Ser	Val	Leu	Lys	Arg	Arg				
			260					265							

<210> 3611

<211> 816

<212> DNA

<213> Homo sapiens

<400> 3611

tacgggggttc actattatgc agtgaaggac aagcagggga taccatgggtg gctgggcctg
 60
 agctacaaag ggatcttcca gtatgactac catgataaag tgaagccaag aaagatattc
 120
 caatggagac agttggaaaa cctgtacttc agagaaaaga agttttccgt ggaagttcat
 180
 gacccacgca gggcttcagt gacaaggagg acgtttgggc acagcgcat tgcagtgcac
 240
 acgtgggtatg catgtccggc attgatcaag tccatctggg ctatggccat aagccaacac
 300
 cagttctatc tggacagaaa gcagagtaag tccaaaatcc atgcagcacg cagcctgagt
 360
 gagatcgcca tcgacctgac cgagacgggg acgctgaaga cctcgaagct ggccaacatg
 420
 ggtagcaagg ggaagatcat cagcggcagc agcggcagcc tgcgtctctc aggttctcag
 480
 gaatcagata gctcgcagtc ggccaagaag gacatgctgg ctgccttgaa gtccaggcag
 540
 gaagctctgg aggaaaccct gcgtcagagg ctggaggaac tgaagaagct gtgtctccga
 600
 gaagctgagc tcacggggcaa gctgccagta gaatatcccc tggatccagg ggaggaacca
 660
 cccattgttc ggagaagaat aggaacagcc ttcaactgg atgaacagaa aatcctgccc
 720
 aaaggagagg aagctgaact ggaacgcctg gaacgagagt ttgccattca gtcccagatt
 780
 acggaggccg cccgccgcct agccagtac cccaac
 816

<210> 3612

<211> 272

<212> PRT

<213> Homo sapiens

<400> 3612

Tyr	Gly	Val	His	Tyr	Tyr	Ala	Val	Lys	Asp	Lys	Gln	Gly	Ile	Pro	Trp
1			5						10					15	
Trp	Leu	Gly	Leu	Ser	Tyr	Lys	Gly	Ile	Phe	Gln	Tyr	Asp	Tyr	His	Asp
			20					25					30		
Lys	Val	Lys	Pro	Arg	Lys	Ile	Phe	Gln	Trp	Arg	Gln	Leu	Glu	Asn	Leu
			35				40					45			
Tyr	Phe	Arg	Glu	Lys	Lys	Phe	Ser	Val	Glu	Val	His	Asp	Pro	Arg	Arg
			50			55					60				
Ala	Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His
			65			70			75					80	
Thr	Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala
				85				90					95		
Ile	Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys
			100				105						110		
Ile	His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu

115	120	125
Thr Gly Thr Leu Lys Thr Ser Lys Leu Ala Asn Met Gly Ser Lys Gly		
130	135	140
Lys Ile Ile Ser Gly Ser Ser Gly Ser Leu Leu Ser Ser Gly Ser Gln		
145	150	155
Glu Ser Asp Ser Ser Gln Ser Ala Lys Lys Asp Met Leu Ala Ala Leu		
165	170	175
Lys Ser Arg Gln Glu Ala Leu Glu Glu Thr Leu Arg Gln Arg Leu Glu		
180	185	190
Glu Leu Lys Lys Leu Cys Leu Arg Glu Ala Glu Leu Thr Gly Lys Leu		
195	200	205
Pro Val Glu Tyr Pro Leu Asp Pro Gly Glu Glu Pro Pro Ile Val Arg		
210	215	220
Arg Arg Ile Gly Thr Ala Phe Lys Leu Asp Glu Gln Lys Ile Leu Pro		
225	230	235
Lys Gly Glu Glu Ala Glu Leu Glu Arg Leu Glu Arg Glu Phe Ala Ile		
245	250	255
Gln Ser Gln Ile Thr Glu Ala Ala Arg Arg Leu Ala Ser Asp Pro Asn		
260	265	270

<210> 3613

<211> 659

<212> DNA

<213> Homo sapiens

<400> 3613

```

acgcgtaaag ttgcctttca agctctggcc tccgggcacg cgatgctccg cggcgggctg
60
actcaggggt gccttggggc tccctgccac cctcctggaa atgatgcaag tcttgactgt
120
cacctggatc cctgcagccc agcctggaat gcgtctggat taggggaaag acgagaaacg
180
aactccagg tggtgcacgg ccacacaaag cgggaagata gggcagttgc tcagaccaa
240
tactgtatct agtgcttctg ctctatctt caatcgtggg gttcttttta atgcaaagtg
300
tcacaaggcc aggaattccc atgtgtgctc agttggccca cagcatcatt gtgcctagga
360
aactgcttca atttatcaag tcctctgggc tgggaatctc actgaattcc aaacggcgga
420
aagaggaaac tttcccaacc cgatgtgggt gtgacgcgag ccaggggccc cagggaact
480
gtcccagagc acaccgtccc cctttaacag caactggagc ttggattcgc tcttatattg
540
tacagtcctt tcgaccattg ccttgagca cccgcacacg cgcacgcac tcgggccg
600
ctcacacaca ctacatacaca cgcacgcaaa cgcggtcgga gaagagcccc cccccccc
659

```

<210> 3614

<211> 123

<212> PRT

<213> Homo sapiens

<400> 3614

```

Met Gln Ser Val Thr Arg Pro Gly Ile Pro Met Cys Ala Gln Leu Ala
 1           5           10           15
His Ser Ile Ile Val Pro Arg Lys Leu Leu Gln Phe Ile Lys Ser Ser
      20           25           30
Gly Leu Gly Ile Ser Leu Asn Ser Lys Arg Arg Lys Glu Glu Thr Phe
      35           40           45
Pro Thr Arg Cys Gly Cys Asp Ala Ser Gln Gly Pro Gln Gly His Cys
      50           55           60
Pro Arg Ala His Arg Pro Pro Leu Thr Ala Thr Gly Ala Trp Ile Arg
      65           70           75           80
Ser Tyr Ile Val Gln Ser Phe Arg Pro Leu Pro Trp Ser Thr Arg Thr
      85           90           95
Arg Ala Arg Ile Ser Gly Arg Ala His Thr His Ser Tyr Thr Arg Thr
      100          105          110
Gln Thr Arg Ser Glu Lys Ser Pro Pro Pro
      115          120

```

<210> 3615

<211> 1388

<212> DNA

<213> Homo sapiens

<400> 3615

```

nnnggcagagc ctcccgaaga aaagggagcc ggcgagcgcc tacgggagtc cggcggcagc
60
agccggtacc ggcaaccacg ggcagctctc agggaatctc cgtcgtgagg ccagaggctc
120
cagtcctccgc gagtccagat gcctgtccag cctccaagca aagacacaga agagatggaa
180
gcagaggggtg attctgctgc tgagatgaat ggggaggagg aagagagtga ggaggagcgg
240
agcggcagcc agacagagtc agaagaggag agctccgaga tggatgatga ggactatgag
300
cgacgcccga gcgagtgtgt cagtgaatg ctggacctag agaagcagtt ctggagcta
360
aaggagaagt tgttcaggga acgactgagt cagctgcggt tgcggctgga ggaagtgggg
420
gctgagagag cccctgaata cacggagccc cttggggggc tgcagcggag cctcaagatt
480
cgcattcagg tggcagggat ctacaagggc ttctgtctgg atgtgatcag gaataagtac
540
gaatgtgagc tgcagggagc caaacagcac ctggagagtg agaagctgct gctctatgac
600
acgctgcagg gggagctgca ggagcggatc cagaggctgg aggaggaccg ccagagcctg
660
gacctcagct ctgaatggtg ggacgacaaa ctgcacgcca gaggcagctc caggtcttgg
720
gactccctgc cgcccagcaa gaggaagaag gcacctctgg tttctggccc atacatcgtg
780
tacatgcttc aagagatcgg catcctggag gactggacag ccatcaaaaa ggctagggca
840
gctgtgtccc ctcagaagag aaaatcggat gacaggcggg cccacaggcc cctcagggtc
900

```

tgcccagcca ggctcctgtg gtgctgctgg gccctccac tccatctggc actggcctgg
 960
 actcctcctc tgccctcctc gaggcctgca cagctgtggc cgtggagctg acctgaccag
 1020
 gcaaggctgc tgtctccatc cctgagccgc ctgccacctc ccactcctga agatccatct
 1080
 cttggggctc ccctgacaga gaagacagcc gaagtcaaag ccacatcctc ttgctgatgt
 1140
 tggatgcagg ctgtccggcc tcagggccag ggagccagtt tccactgtgc gggaactctg
 1200
 agtcagacgt gattatctgg gggctctgcc accctggctg gatctggagg caagatgcca
 1260
 ggccccccag gtgttctcag ggcagttctt ggtgtctgct tctcagatc caaggactgg
 1320
 aattaaaacc tttcctggga ctctggaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaaaaa
 1388

<210> 3616

<211> 290

<212> PRT

<213> Homo sapiens

<400> 3616

Met	Pro	Val	Gln	Pro	Pro	Ser	Lys	Asp	Thr	Glu	Glu	Met	Glu	Ala	Glu
1				5					10					15	
Gly	Asp	Ser	Ala	Ala	Glu	Met	Asn	Gly	Glu	Glu	Glu	Glu	Ser	Glu	Glu
			20					25					30		
Glu	Arg	Ser	Gly	Ser	Gln	Thr	Glu	Ser	Glu	Glu	Glu	Ser	Ser	Glu	Met
		35					40					45			
Asp	Asp	Glu	Asp	Tyr	Glu	Arg	Arg	Arg	Ser	Glu	Cys	Val	Ser	Glu	Met
	50					55					60				
Leu	Asp	Leu	Glu	Lys	Gln	Phe	Ser	Glu	Leu	Lys	Glu	Lys	Leu	Phe	Arg
65					70					75					80
Glu	Arg	Leu	Ser	Gln	Leu	Arg	Leu	Arg	Leu	Glu	Glu	Val	Gly	Ala	Glu
				85					90					95	
Arg	Ala	Pro	Glu	Tyr	Thr	Glu	Pro	Leu	Gly	Gly	Leu	Gln	Arg	Ser	Leu
			100					105					110		
Lys	Ile	Arg	Ile	Gln	Val	Ala	Gly	Ile	Tyr	Lys	Gly	Phe	Cys	Leu	Asp
		115					120					125			
Val	Ile	Arg	Asn	Lys	Tyr	Glu	Cys	Glu	Leu	Gln	Gly	Ala	Lys	Gln	His
	130					135					140				
Leu	Glu	Ser	Glu	Lys	Leu	Leu	Tyr	Asp	Thr	Leu	Gln	Gly	Glu	Leu	
145					150				155					160	
Gln	Glu	Arg	Ile	Gln	Arg	Leu	Glu	Glu	Asp	Arg	Gln	Ser	Leu	Asp	Leu
			165						170					175	
Ser	Ser	Glu	Trp	Trp	Asp	Asp	Lys	Leu	His	Ala	Arg	Gly	Ser	Ser	Arg
		180						185					190		
Ser	Trp	Asp	Ser	Leu	Pro	Pro	Ser	Lys	Arg	Lys	Lys	Ala	Pro	Leu	Val
		195					200					205			
Ser	Gly	Pro	Tyr	Ile	Val	Tyr	Met	Leu	Gln	Glu	Ile	Gly	Ile	Leu	Glu
	210					215					220				
Asp	Trp	Thr	Ala	Ile	Lys	Lys	Ala	Arg	Ala	Ala	Val	Ser	Pro	Gln	Lys

```

225          230          235          240
Arg Lys Ser Asp Asp Arg Arg Thr His Arg Pro Leu Arg Val Cys Pro
          245          250          255
Ala Arg Leu Leu Trp Cys Cys Trp Ala Leu Pro Leu His Leu Ala Leu
          260          265          270
Ala Trp Thr Pro Pro Leu Pro Ser Ser Arg Pro Ala Gln Leu Trp Pro
          275          280          285
Trp Ser
          290

```

<210> 3617

<211> 804

<212> DNA

<213> Homo sapiens

<400> 3617

```

nnccaacctg catgagattc agtttgccg aaccttcag catcagctc gagattctgg
60
ggctttaaca gcaagggaga ggtgcatggg atcaatggga cccaatgggg ccagactctg
120
aggatgggat ggtagtagtg aaggacatag gatgggggta gagtgtggag actttttgaa
180
atagtataga tgaatgccct gaggggactg tgaacaagct ctgccctct taggaaatca
240
atggggaatc aactaaatta aataaaaaat ggggtcaaga ttaagaggca gggtcacca
300
gggaatggtt taggtcctgg catctttgaa ggggttgaa gggctggcag gaggcactga
360
gggccctggg ccctgggcca ggtggtgaat tacagcgact cacggacagc agaagagatc
420
tgtgagagca gctccaagat gatcacctc atcgacctgg caggccacca taagtaccta
480
cacaccacca tctttggcct cacatcatac tgccccgact gcgccctgct cctcgctcgt
540
gccaaactg ggattgctgg caccacaagg gaacatctgg ggctggccct ggccctgaaa
600
gtgcccttct tcatcggtg cagcaagatc gacctatgtg ccaagaccac agtggagagg
660
acagtacgcc agctggagcg ggtcctcaag cagcctggct gccacaagg ccccatgctg
720
gtcacctctg aggatgatgc cgctcactgt gccagcagt ttgctcagtc acccaatgtc
780
accccatct tcacattgtc cagt
804

```

<210> 3618

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3618

```

Gly Pro Trp Ala Leu Gly Gln Val Val Asn Tyr Ser Asp Ser Arg Thr
1          5          10          15
Ala Glu Glu Ile Cys Glu Ser Ser Ser Lys Met Ile Thr Phe Ile Asp

```

```

<400> 3619
acgcgctcggc agaggtggct tcgtcccgcg gagtccaggc ttcagctcct ggcttctctt
60
ctttctctcct agagatcaga tgtcggaact ccagctgagg gcatgtctta ctgggcacgc
120
aggtgtctct tcttgagaag aactgtccat accatggtgg tggtaaggct ttcaccagtt
180
ctcaggatgc ccatagggat ggggtgaagcc tgcctggcct gtggtgcttt ccagtggccg
240
tcattctcatt agggcccccac agtggcatta ggatgcacct ctcggcggtg ttcaacgccc
300
tcctggtgtc ggtgctggca gcggtcctgt ggaagcatgt gcggtcgcgt gagcatgcag
360
ccacactgga ggaggagctg gccctcagcc gacaggccac agagccagcc ccagcactga
420
ggatcgacta cccgaaggca ctgcagatcc tgatggaggg cggcacacac atgggtgtgca
480
cgggcccgcac gcacacagac cgcattctgcc gcttcaagtg gctctgtac tccaacgagg
540
ctgaggagtt catcttcttc catggcaaca cctctgtcat gctgcccac ctgggctccc
600
ggcgcttcca gccagccctg ctcgacctat ccaccgtgga ggaccacaac actcagtact
660
tcaacttcgt ggagctgcct gctgctgccc tgcgcttcat gcccaagccg gtgttcgtgc
720
cagacgtggc cctcatcgcc aaccgcttca accccgacaa cctcatgcac gtctttcatg
780
acgacctgct gccactcttc tacaccttgc ggcagtttcc cggcctggcc caccaggcac
840
ggctcttctt catggagggc tggggcgagg gtgcacactt cgacctctac aagctgctca
900

```

gccccaaagca gcctctcctg cgggcacagc tgaagaccct gggccggc
948

<210> 3620

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3620

Trp	Arg	Ala	Ala	His	Thr	Trp	Cys	Ala	Arg	Ala	Ala	Arg	Thr	Gln	Thr
1				5					10					15	
Ala	Ser	Ala	Ala	Ser	Ser	Gly	Ser	Ala	Thr	Pro	Thr	Arg	Leu	Arg	Ser
		20						25					30		
Ser	Ser	Ser	Ser	Met	Ala	Thr	Pro	Leu	Ser	Cys	Cys	Pro	Thr	Trp	Ala
		35					40					45			
Pro	Gly	Ala	Ser	Ser	Gln	Pro	Cys	Ser	Thr	Tyr	Pro	Pro	Trp	Arg	Thr
	50				55					60					
Thr	Thr	Leu	Ser	Thr	Ser	Thr	Ser	Trp	Ser	Cys	Leu	Leu	Leu	Pro	Cys
65					70					75				80	
Ala	Ser	Cys	Pro	Ser	Arg	Cys	Ser	Cys	Gln	Thr	Trp	Pro	Ser	Ser	Pro
				85					90					95	
Thr	Ala	Ser	Thr	Pro	Thr	Thr	Ser	Cys	Thr	Ser	Phe	Met	Thr	Thr	Cys
		100						105					110		
Cys	His	Ser	Ser	Thr	Pro	Cys	Gly	Ser	Phe	Pro	Ala	Trp	Pro	Thr	Arg
	115						120				125				
His	Gly	Ser	Ser	Ser	Trp	Arg	Ala	Gly	Ala	Arg	Val	His	Thr	Ser	Thr
	130					135					140				
Ser	Thr	Ser	Cys	Ser	Ala	Pro	Ser	Ser	Leu	Ser	Cys	Gly	His	Ser	
145					150					155					

<210> 3621

<211> 2934

<212> DNA

<213> Homo sapiens

<400> 3621

cccggggcga gacggtgctt tcgcggcgtg tgcttgacagg agcgcacagt tcaggcgccg
60
ggacaagctg ttgggggtgtg agtgagctct ccagaatggc acatggctcc ggggtgcccc
120
ggttaaaagg aaggatttgc acaccttcca cttagggctc gggtaatccc aaacttcctc
180
ccttaattgg gcttgacgtg ctaaaaagca gatcggttctc tctgaggttt tcccaacagt
240
acctcaagaa aataacatct gttttttgta acgttccaca gtattcggaa ttggctacag
300
aacataataa gatccttgcc agcacattac agaataatatt tggtgaacct tcttgagaat
360
tcagagaaac tgctgagtga ccaactgaacg aaaagatcta atcttaaggc ttacgcgtgt
420
tccatccacc acatcagaac aatgtcgtat gtttttgtaa atgattcttc tcagactaac
480
gtgcccttgc tgcaagcctg tattgatggg gactttaatt attccaagcg gcttttggaa
540

agtggctttg acccaaatat tcgtgacagc aggggcagaa caggccttca ccttgcagca
600
gctcgaggga atgtagacat ctgccagtta ctgcataaat tcggtgccga tcttctggcc
660
acagattatc aaggaaacac agctcttcac ctctgtggcc atgtggatac tatccaattt
720
ttggtttcca atggactcaa aattgatatt tgcaatcatc aagggtgctac ccctttagtt
780
ctggcaaagc gcagaggagt aaataaagat gtcattccgat tgctggaatc tttggaagaa
840
caggaggtga aaggatttaa cagaggaacc cactcgaaac tggagaccat gcaaacagct
900
gagagtgaag gtgccatgga aagccattca ctctcaatc ccaacctgca gcaaggtgaa
960
ggagtcctct ccagcttccg aaccacgtgg caggagtttg tggaggatct gggcttctgg
1020
agagtattgc tgttgatctt cgctattgct ttgctgtctc ttggcattgc ttattatgtg
1080
agtgggggtgc tacccttcgt ggaaaaccag cctgaactgg tgcattaaag gagctcatgg
1140
aagatgaggc aattaatttc ctgtttcctg gcttccaatg tttgttctca gtttctcaga
1200
atttttctta gcgcaaagca gtgagggcag tacatgttct ttttgcatth ttaattattg
1260
taatcctttt agataatgat gtgttcattt gaactaacta catactatga tcaagtatat
1320
tgcaccta taacacggaag tgactagaga atggaagata aaggaagaag cttaggaagtc
1380
gtttgataaa aacacggaag tgactagaga atggaagata aaggaagaag cttaggaagtc
1440
cttgctatca aaaccttata ctaatatagg accaattgaa gtattcaaaa agaaaaacag
1500
tatcttatat gattagtttt tgttgggtgt tttgttttca tttatttttg caagagccac
1560
tttttattta ctttctctag ggataagaga taaaacttga agtacttttt tcaaatcttg
1620
tgtgcaaatt agtattgtta gcattctatt ggcttatttt agtattttta agtctagtca
1680
caaaccacaa aaaacttttg aaaatgagct atattttgtt caaagataat tgatttgatc
1740
ttatatttat ttgttttttag gataattttt gatctttttg taaactgctt tgcttggtta
1800
tatctgtgaa aaataaatga gttcattttg ttcactttcc aattttcccg agtatcctag
1860
tcacaaaga taacagttca tcagaattac agtcagaaaa tcttttttct actgaatagt
1920
tagcagggaa aaataattct gatatttaac tgcataatt ctgtagtgtc attatagtga
1980
aaaactcagt tctataagct agctgtgttg tcacagtttt atcatagttc ataattattt
2040
catgtgcaat cctattttgga ggcctgttta gacttttaac aatcccatcc atatctgtaa
2100
ttctctgatg gcaagaatgg atggagcatt tctgagttaa cagtgtgtga cagtatcgta
2160

ctgggtgtca taaactcttt atgaatggta atattatgta aattgaaatc tggccctcaa
 2220
 actatattgc agctttcagc agtatgtttg aaggcctctt ttgttaatga ttctgtaatg
 2280
 tatgaattat gttcttgagt ggtaaaaaa gaatatgaag gcttgataat tatttattgg
 2340
 gtaaagtcag gaaattgtag tgaaagaact aatggttttg ttttttgga taaaggcacc
 2400
 taagctattg ctaattgaat tgctgctaga attagaaatt atgctttaga atagaattgg
 2460
 tatttctgtg attctttttg cttcttggtg ttttctcttg tatctatgta tctagtattg
 2520
 aggcttgctc tttcatgtgg ctttatcctc tctttaatag ctggtgtaaa attcctgagt
 2580
 aactggctgc ttcaggatca gcttgagag tcttgctttt aggttagata caaacaagt
 2640
 aaatcatagt tgggtgaaat ccagcaaaaa acagctggct ttggaatgga gaacactaca
 2700
 attcaaatgt gaagtatatt cagaagaaaa ctttggaatt agctttacat ttgtttgtaa
 2760
 atctaaacaa atatgcaaaa ttggtcaaaa tgtaagtata tagcattttt aaagattaat
 2820
 ggttcctttt atgtgctgat ttctttgtat tctgttctct gcattcatca ttcaggaata
 2880
 ccaccaataa atgtatttat atatccctta aaaaaaaaaa aaaaaaaaaa aaaa
 2934

<210> 3622

<211> 228

<212> PRT

<213> Homo sapiens

<400> 3622

Met	Ser	Tyr	Val	Phe	Val	Asn	Asp	Ser	Ser	Gln	Thr	Asn	Val	Pro	Leu
1				5				10					15		
Leu	Gln	Ala	Cys	Ile	Asp	Gly	Asp	Phe	Asn	Tyr	Ser	Lys	Arg	Leu	Leu
		20						25					30		
Glu	Ser	Gly	Phe	Asp	Pro	Asn	Ile	Arg	Asp	Ser	Arg	Gly	Arg	Thr	Gly
		35					40					45			
Leu	His	Leu	Ala	Ala	Ala	Arg	Gly	Asn	Val	Asp	Ile	Cys	Gln	Leu	Leu
	50					55				60					
His	Lys	Phe	Gly	Ala	Asp	Leu	Leu	Ala	Thr	Asp	Tyr	Gln	Gly	Asn	Thr
65					70				75					80	
Ala	Leu	His	Leu	Cys	Gly	His	Val	Asp	Thr	Ile	Gln	Phe	Leu	Val	Ser
		85						90					95		
Asn	Gly	Leu	Lys	Ile	Asp	Ile	Cys	Asn	His	Gln	Gly	Ala	Thr	Pro	Leu
		100					105					110			
Val	Leu	Ala	Lys	Arg	Arg	Gly	Val	Asn	Lys	Asp	Val	Ile	Arg	Leu	Leu
	115					120					125				
Glu	Ser	Leu	Glu	Glu	Gln	Glu	Val	Lys	Gly	Phe	Asn	Arg	Gly	Thr	His
	130					135				140					
Ser	Lys	Leu	Glu	Thr	Met	Gln	Thr	Ala	Glu	Ser	Glu	Ser	Ala	Met	Glu
145					150				155				160		
Ser	His	Ser	Leu	Leu	Asn	Pro	Asn	Leu	Gln	Gln	Gly	Glu	Gly	Val	Leu

```

                165                170                175
Ser Ser Phe Arg Thr Thr Trp Gln Glu Phe Val Glu Asp Leu Gly Phe
                180                185                190
Trp Arg Val Leu Leu Leu Ile Phe Val Ile Ala Leu Leu Ser Leu Gly
                195                200                205
Ile Ala Tyr Tyr Val Ser Gly Val Leu Pro Phe Val Glu Asn Gln Pro
                210                215                220
Glu Leu Val His
225

```

<210> 3623

<211> 586

<212> DNA

<213> Homo sapiens

<400> 3623

```

ctgtgtgcat tcaatgcgtg agctgcgacc taagcagaga tctaacaaga caatgaggca
60
gtgttccagg gtatccatta aaaccggcgt gggcaactac atgttgatta aaccttccga
120
ggcagcaaaa tgtgggcaca gcgccatgtc tgggttctgc agctgtttga tgatcctctt
180
gcggaatttc tccctcacac gattaaattc cattatgtcc atggggtcct cttcgatcca
240
aaacttatga aattcatgca tcaaatagca gaatgtttgc tgaaagttag acaatgttgg
300
agcttctggg gcgatattgt agaaatgggt ttttagagct ccgctgacca gtagattata
360
tgccagggtca gttatattga tgcccacaat tgcaaatgag tacccaattg ccttatccat
420
ccttttcttc tcccattctg ctttgctgaa tttgettatt tcttcttttag tgatatecct
480
gcatttcgga tgaagagagt cagacaggac ctgctgagct gctgtggcat ccctttccgc
540
gaaatactgc aaattgtaca gtcccagaag tcccattcct cgaaag
586

```

<210> 3624

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3624

```

Met Gly Leu Leu Gly Leu Tyr Asn Leu Gln Tyr Phe Ala Glu Arg Asp
 1          5          10          15
Ala Thr Ala Ala Gln Gln Val Leu Ser Asp Ser Leu His Pro Lys Cys
 20          25          30
Arg Asp Ile Thr Lys Glu Glu Ile Ser Lys Phe Ser Lys Ala Glu Trp
 35          40          45
Glu Lys Lys Arg Met Asp Lys Ala Ile Gly Tyr Ser Phe Ala Ile Val
 50          55          60
Gly Ile Asn Ile Thr Asp Leu Ala Tyr Asn Leu Leu Val Ser Gly Ala
 65          70          75          80
Leu Lys Thr His Phe Tyr Asn Ile Ala Pro Glu Ala Pro Thr Leu Ser

```

85								90				95			
His	Phe	Gln	Gln	Thr	Phe	Cys	Tyr	Leu	Met	His	Glu	Phe	His	Lys	Phe
100								105				110			
Trp	Ile	Glu	Glu	Asp	Pro	Met	Asp	Ile	Met	Glu	Phe	Asn	Arg	Val	Arg
115								120				125			
Glu	Lys	Phe	Arg	Lys	Arg	Ile	Ile	Lys	Gln	Leu	Gln	Asn	Pro	Asp	Met
130								135				140			
Ala	Leu	Cys	Pro	His	Phe	Ala	Ala	Ser	Glu	Gly	Leu	Ile	Asn	Met	
145								150				155			

```
<210> 3625
<211> 4799
<212> DNA
<213> Homo sapiens
```

```

<400> 3625
naaataaaca tcatcatcta tgtgtaatca aattcccata ttttcttctt ataaagaatt
60
tgcttttagtt ttccaataag gcattttttt gtcattccaaa catctcttcc ttttaaaatt
120
ttcttagagt taaaaccata aataagagga tttaaaccac taaaatgaca cgtgccaaca
180
tcttcattca gccagacctg gttaaattcta tcaaaactag acagttaaat aagaaccacg
240
ttataaaaaa attagccaaa aaaagactat tagataattc tgcaaaacta aatatgaaac
300
tgtgctaaac aaaatatgtg caaagggtaca caagcataga gccacgttgg gggttatgct
360
cagattagtt ttaaagctcc ctctagtggg ttttaattca gagttgtcca cgggtggtgg
420
gtttactttg aactcacacg agtcaaagaa aaataaaata tgcacaacca ctccccaaa
480
aggtgtctta tggagccggg gcttcacgtg gtccacaccc aggactgctt ggggtgtccc
540
taggggtggg ggggtggggg gacaaagaca aggccactgt cccaagtcct gggccaggca
600
acatcctgga gaccctcggg ctgagggttag gggcaagggc aacctgatg actccacgtc
660
ctcgtccaag gcctcagagg agccctgccg ggacctcagt gctttggagg aggtggtgag
720
agcaggccag gctgaggggc ctgccttgga aggcgagggg ctgaggggtg gggctgtaaa
780
gacagccctt tcatcaggaa gctggagctg aaaagcccta ataccctaa tccccaaact
840
cttgatccc gtcccacaga cgagagtcct tgctcggcat cctccagcac aggtgctctg
900
ggtgggtccc agggccaggc actagagaag gaaagggtt gttgtgccag tggcctgggc
960
tgctgatggg ggtataccca cactgccac catgttcac attgcagggc ccagtggtgt
1020
cagagaggaa ccagtgggcc ccagagctgg ctgtggggcc gcggagggtca tcgaggccac
1080
agccatggac tccactctg ggccaggccc aaaggatgtg ctggtcccca ggactgggct
1140

```

ccccgaagc tggttcagtg tcagcggtg gggctggttc acctggaaag ggtaacagg
1200
ggccgaggtg gcgggagcac ctggtgccag gaaagggttg agggactggg ctggtggggc
1260
aggcctggtc accagtgagt ccaggttcac cagggccgcg ttggggccca ggaaggactc
1320
aggtgttttc cgggcactgc tgggcttgct tgaggcgaca gtcaggggtt gagactcaaa
1380
ggggtcaggg ctggtagtgc cattgttttg ggatggcaga gaggtcacag attcggctgt
1440
ttttttgaa gtccgaaggt tgtcaaattc agaaaagtca tctttaattg taccattcag
1500
attactgaag agctcaaagg acccagagac agacacgggc ttggtggtgg agactgcgcc
1560
ccacgcgtca gaagctcttt tcccagcact ggaggcaggc tgctgtgaag ctgccaggg
1620
gtccgagttc ttggggacag attgtgcggt ggctccagtg ggcaccccc atgggtcaat
1680
ggaggcagct ggcttggtac caaacgatgg ccaggggtct gaagtactcg caggagccgc
1740
tggccccccc caggggttgg tctggttagt ggaggctgac gggccccagg gctctgcttt
1800
ctgggccgcg gggcccgagc tggggagagc atocattaaa tccaacagcg tagtctgctg
1860
tgggagagag ccattgctctt tcttttttgg aattttaact gtgtcccttc ggctttcttc
1920
cagggccatc tgtaatctga ggtcatcacc ccgctgagg cgttcttcct gctcagccac
1980
ttctctgctc atggcaagtg ccagctgcag ctgaagctcc tcttctccac tagtgtgggg
2040
ccgggcttgc tccagctcgg aggacactcg cggggaggtg gagccatggt aggaggccgg
2100
ggagcccccg gccttgccat actcctgctc cgagtggctg gtggagaggt tgggctggct
2160
ggagcctgc ccaaaggta tctggttgct gcccatgcc a gtggcaacct gggccatgcg
2220
ctctttggtt ttgagagcct gggccctctc agccttcaac cgttcctcgt cgcgcagcag
2280
ggccaccagt tgctttgact tctcacgcac attgatgcc ttgtccttgc catctcggtc
2340
aatgtactgg aagtccttca gggctctgat ggcgtacatg ttctccggc actgctgcga
2400
cacgcgctcc gagcctgtct tgatgaggta gtccagcagc gtcagcgctc tgtacacatg
2460
ccgccagttc ttgccatggt cattcagccg ctccacacc atgctcatga tctccgagaa
2520
ggccaccacg ttgtaggta ggtcggaat ctgggtcatc agagaactgg acgggcccc
2580
ggggtcattg gaggtggctt cccggacttt gattttctgc tctgagtaat tgttcacgat
2640
gtccagcacc tgccgcagcc ttcgtccggg agtcgcccc tctctccag catcggggcc
2700
ctgtgcccct tgctgctgca gccgggcacc atgtcgacct cgtccttgag gcgccagatg
2760

aagaacatcg tccacaacta ctcagaggcg gagatcaagg ttcgagaggc cacgagcaat
2820
gacccctggg gcccatccag ctccctcatg tcagagattg ccgacctcac ctacaacgtt
2880
gtcgcttct cggagatcat gagcatgatc tggaagcggc tcaatgacca tggcaagaac
2940
tggcgtaacg tttaacaagg catgacgctg atggagtacc tcatcaagac cggctcggag
3000
cgcgtgtcgc agcagtgcaa ggagaacatg tacgcctgac agacgctgaa ggacttccag
3060
tacgtggacc gcgacggcaa ggaccaggcg gtgaacgtgc gtgagaaagc taagcagctg
3120
gtggccctgc tgcgcgacga ggaccggctg cgggaagagc gggcgacgc gctcaagacc
3180
aaggaaaagc tggcacagac cgccacggcc tcatcagcag ctgtgggctc agggccccct
3240
cccagggcgg agcaggcgtg gccgcagagc agcggggagg aggagctgca gctccagctg
3300
gccctggcca tgagcaagga ggaggcggac caggaggagc ggatccgtcg cggggatgac
3360
ctgcggctgc agatggcaat cgaggagagc aagagggaga ctgggggcaa ggaggagtcg
3420
tccctcatgg accttgctga cgtcttcacg gccccagctc ctgccccgac cacagacccc
3480
tgggggggccc cagcaccat ggctgctgcc gtccccacgg ctgccccac ctcggaacccc
3540
tggggcggcc cccctgtccc tccagctgct gatccctggg gaggtccagc cccacgccc
3600
gcctctgggg acccctggag gcctgctgcc cctgcaggac cctcagttga cccttgggg
3660
gggaccccag cccctgcagc tggggagggg cccacgcctg atccatgggg aagtccgat
3720
gggtgggtcc cggtcagtgg gccctcagcc tccgatccct ggacaccggc cccggccttc
3780
tcagatccct ggggagggtc acctgccaa cccagcacca atggcacaac aacagccggg
3840
ggattcgaca cggagcccgga cgagttctct gactttgacc gactccgcac ggcactgccg
3900
acctccggga gcagcgagg agagctggag ctgctggcag gagagggtcc ggcccgaagc
3960
cctggggcgt ttgacatgag tggggtcagg ggatctctgg ctgaggctgt gggcagcccc
4020
ccacctgcag ccacaccaac tcccacgccc cccacccgga agacgcccga gtcattcctg
4080
gggcccattg cagccctcgt cgacctggac tcgctgggtga gccggccggg cccacgccc
4140
cctggagcca aggcctccaa ccccttccct ccaggcggag gccagccac tggcccttc
4200
gtcaccaacc ccttcagcc cgcgcctccc gcgacgtca cctgaacca gctccgtctc
4260
agtcctgtgc ctccgtccc tggagcgcca cccacgtaca tctctccct tggcgggggc
4320
cctggcctgc ccccatgat gccccgggc ccccgccc ccaactaa tcccttctc
4380

ctataatcca gggcggaatg gggcctggct ccatcgggt gcccattec ggctccctgg
 4440
 gagatcagtg ttgtgagtgc atgtgaaatg gggatcccca ccccatggc ccttcccctt
 4500
 cctggggccc actcacacta caccctcttc ctttcccacc ccacctcccc ggagagaaac
 4560
 tggacatggg gcctggggag gggagctggc cagaggagga cccctttccc gtggcattag
 4620
 aagggggagg ggtgctgggg accccaccca ttccccctcc ctccaaactc ccaaccccca
 4680
 gtcagtgttt gagcctcttc gttccccca cgcaccgctc acgcaccctc ggtgaatcct
 4740
 tgggtgatgat ttgggcaact ttgggaataa atggcaattc ccacgggctt ggcaaaaaa
 4799

<210> 3626

<211> 551

<212> PRT

<213> Homo sapiens

<400> 3626

Met	Ser	Thr	Ser	Ser	Leu	Arg	Arg	Gln	Met	Lys	Asn	Ile	Val	His	Asn
1				5					10				15		
Tyr	Ser	Glu	Ala	Glu	Ile	Lys	Val	Arg	Glu	Ala	Thr	Ser	Asn	Asp	Pro
		20						25					30		
Trp	Gly	Pro	Ser	Ser	Ser	Leu	Met	Ser	Glu	Ile	Ala	Asp	Leu	Thr	Tyr
		35				40						45			
Asn	Val	Val	Ala	Phe	Ser	Glu	Ile	Met	Ser	Met	Ile	Trp	Lys	Arg	Leu
50					55						60				
Asn	Asp	His	Gly	Lys	Asn	Trp	Arg	His	Val	Tyr	Lys	Ala	Met	Thr	Leu
65				70					75					80	
Met	Glu	Tyr	Leu	Ile	Lys	Thr	Gly	Ser	Glu	Arg	Val	Ser	Gln	Gln	Cys
			85					90					95		
Lys	Glu	Asn	Met	Tyr	Ala	Val	Gln	Thr	Leu	Lys	Asp	Phe	Gln	Tyr	Val
		100					105						110		
Asp	Arg	Asp	Gly	Lys	Asp	Gln	Gly	Val	Asn	Val	Arg	Glu	Lys	Ala	Lys
		115				120					125				
Gln	Leu	Val	Ala	Leu	Leu	Arg	Asp	Glu	Asp	Arg	Leu	Arg	Glu	Glu	Arg
		130				135					140				
Ala	His	Ala	Leu	Lys	Thr	Lys	Glu	Lys	Leu	Ala	Gln	Thr	Ala	Thr	Ala
145				150					155					160	
Ser	Ser	Ala	Ala	Val	Gly	Ser	Gly	Pro	Pro	Pro	Glu	Ala	Glu	Gln	Ala
		165						170						175	
Trp	Pro	Gln	Ser	Ser	Gly	Glu	Glu	Glu	Leu	Gln	Leu	Gln	Leu	Ala	Leu
		180						185					190		
Ala	Met	Ser	Lys	Glu	Glu	Ala	Asp	Gln	Glu	Glu	Arg	Ile	Arg	Arg	Gly
		195				200					205				
Asp	Asp	Leu	Arg	Leu	Gln	Met	Ala	Ile	Glu	Glu	Ser	Lys	Arg	Glu	Thr
		210				215					220				
Gly	Gly	Lys	Glu	Glu	Ser	Ser	Leu	Met	Asp	Leu	Ala	Asp	Val	Phe	Thr
225					230				235					240	
Ala	Pro	Ala	Pro	Ala	Pro	Thr	Thr	Asp	Pro	Trp	Gly	Gly	Pro	Ala	Pro
			245					250					255		
Met	Ala	Ala	Ala	Val	Pro	Thr	Ala	Ala	Pro	Thr	Ser	Asp	Pro	Trp	Gly

260 265 270
 Gly Pro Pro Val Pro Pro Ala Ala Asp Pro Trp Gly Gly Pro Ala Pro
 275 280 285
 Thr Pro Ala Ser Gly Asp Pro Trp Arg Pro Ala Ala Pro Ala Gly Pro
 290 295 300
 Ser Val Asp Pro Trp Gly Gly Thr Pro Ala Pro Ala Ala Gly Glu Gly
 305 310 315 320
 Pro Thr Pro Asp Pro Trp Gly Ser Ser Asp Gly Gly Val Pro Val Ser
 325 330 335
 Gly Pro Ser Ala Ser Asp Pro Trp Thr Pro Ala Pro Ala Phe Ser Asp
 340 345 350
 Pro Trp Gly Gly Ser Pro Ala Lys Pro Ser Thr Asn Gly Thr Thr Thr
 355 360 365
 Ala Gly Gly Phe Asp Thr Glu Pro Asp Glu Phe Ser Asp Phe Asp Arg
 370 375 380
 Leu Arg Thr Ala Leu Pro Thr Ser Gly Ser Ser Ala Gly Glu Leu Glu
 385 390 395 400
 Leu Leu Ala Gly Glu Val Pro Ala Arg Ser Pro Gly Ala Phe Asp Met
 405 410 415
 Ser Gly Val Arg Gly Ser Leu Ala Glu Ala Val Gly Ser Pro Pro Pro
 420 425 430
 Ala Ala Thr Pro Thr Pro Thr Pro Thr Arg Lys Thr Pro Glu Ser
 435 440 445
 Phe Leu Gly Pro Asn Ala Ala Leu Val Asp Leu Asp Ser Leu Val Ser
 450 455 460
 Arg Pro Gly Pro Thr Pro Pro Gly Ala Lys Ala Ser Asn Pro Phe Leu
 465 470 475 480
 Pro Gly Gly Gly Pro Ala Thr Gly Pro Ser Val Thr Asn Pro Phe Gln
 485 490 495
 Pro Ala Pro Pro Ala Thr Leu Thr Leu Asn Gln Leu Arg Leu Ser Pro
 500 505 510
 Val Pro Pro Val Pro Gly Ala Pro Pro Thr Tyr Ile Ser Pro Leu Gly
 515 520 525
 Gly Gly Pro Gly Leu Pro Pro Met Met Pro Pro Gly Pro Pro Ala Pro
 530 535 540
 Asn Thr Asn Pro Phe Leu Leu
 545 550

<210> 3627

<211> 1760

<212> DNA

<213> Homo sapiens

<400> 3627

ggcgaggag atcagcagga cgctgcgcac aacatgggca accacctgcc gctcctgcct
 60
 gcagagagtg aggaagaaga tgaaatggaa gttgaagacc aggatagtaa agaagccaaa
 120
 aaaccaaaca tcataaattt tgacaccagt ctgccgacat cacatacata cctaggtgct
 180
 gatattggaag aatttcatgg caggactttg cacgatgacg acagctgtca ggtgattcca
 240
 gttcttccac aagtgatgat gatcctgatt cccggacaga cattaacctct tcagcttttt
 300

cacctcaag aagtcagtat ggtgcggaat ttaattcaga aagatagaac ctttgctggt
360
cttgcataca gcaatgtaca ggaaagggaa gcacagtttg gaacaacagc agagatatat
420
gcctatcgag aagaacagga ttttgggaatt gagatagtga aagtgaagc aattggaaga
480
caaagggttca aagtccttga gctaagaaca cagtcagatg gaatccagca agctaaagtg
540
caaattcttc ccgaatgtgt gttgccttca accatgtctg cagttcaatt agaatccctc
600
aataagtgcc agatatttcc ttcaaacct gtctcaagag aagaccaatg ttcataaaa
660
tggtggcaga aataccagaa gagaaagttt cattgtgcaa atctaacttc atggcctcgc
720
tggtgtgatt ccttatatga tgctgagacc ttaatggaca gaatcaagaa acagctacgt
780
gaatgggatg aaaatctaaa agatgattct cttccttcaa atccaataga ttttcttac
840
agagtagctg ctgtcttcc tattgatgat gtattgagaa ttcagctcct taaaattggc
900
agtgtatcc agcgacttcg ctgtgaatta gacattatga ataaatgtac ttcccttgc
960
tgtaacaat gtcaagaaac agaaataaca accaaaaatg aaatattcag tttatcctta
1020
tgtgggccga tggcagctta tgtgaatcct catggatatg tgcagagac acttactgtg
1080
tataaggctt gcaacttgaa tctgataggc cggccttcta cagaacacag ctggtttctt
1140
gggtatgcct ggactgttgc ccagtgtgaa atctgtgcaa gccatattgg atggaagttt
1200
acggccacca aaaagacat gtcacctcaa aaattttggg gcttaacgcg atctgctctg
1260
ttgcccacga tcccagacac tgaagatgaa ataagtccag acaaagtaat actttgcttg
1320
taaacagatg tgatagagat aaagttagtt atctaacaaa ttggttatat tctaagatct
1380
gctttggaaa ttattgcctc tgatacatc ctaagtaaac ataacattaa tacctaagta
1440
aacataacat tacttggagg gttgcagttt ctaagtgaac ctgtatttga aacttttaag
1500
tatactttag gaaacaagca tgaacggcag tctagaatac cagaaacatc tacttgggta
1560
gcttgggtcc attatcctgt ggaatctgat atgtctggta gcatgtcatt gatgggacat
1620
gaagacatct ttggaaatga tgagattatt tcctgtatgc agtcatttct gaggctttct
1680
tgcacatag cccctgtgac atttctcttc agaaatatta cactctacaa aattgtttta
1740
tcaagggtcca aaattactat
1760

<210> 3628

<211> 440

<212> PRT

<213> Homo sapiens

<400> 3628

Gly Glu Gly Asp Gln Gln Asp Ala Ala His Asn Met Gly Asn His Leu
 1 5 10 15
 Pro Leu Leu Pro Ala Glu Ser Glu Glu Glu Asp Glu Met Glu Val Glu
 20 25 30
 Asp Gln Asp Ser Lys Glu Ala Lys Lys Pro Asn Ile Ile Asn Phe Asp
 35 40 45
 Thr Ser Leu Pro Thr Ser His Thr Tyr Leu Gly Ala Asp Met Glu Glu
 50 55 60
 Phe His Gly Arg Thr Leu His Asp Asp Asp Ser Cys Gln Val Ile Pro
 65 70 75 80
 Val Leu Pro Gln Val Met Met Ile Leu Ile Pro Gly Gln Thr Leu Pro
 85 90 95
 Leu Gln Leu Phe His Pro Gln Glu Val Ser Met Val Arg Asn Leu Ile
 100 105 110
 Gln Lys Asp Arg Thr Phe Ala Val Leu Ala Tyr Ser Asn Val Gln Glu
 115 120 125
 Arg Glu Ala Gln Phe Gly Thr Thr Ala Glu Ile Tyr Ala Tyr Arg Glu
 130 135 140
 Glu Gln Asp Phe Gly Ile Glu Ile Val Lys Val Lys Ala Ile Gly Arg
 145 150 155 160
 Gln Arg Phe Lys Val Leu Glu Leu Arg Thr Gln Ser Asp Gly Ile Gln
 165 170 175
 Gln Ala Lys Val Gln Ile Leu Pro Glu Cys Val Leu Pro Ser Thr Met
 180 185 190
 Ser Ala Val Gln Leu Glu Ser Leu Asn Lys Cys Gln Ile Phe Pro Ser
 195 200 205
 Lys Pro Val Ser Arg Glu Asp Gln Cys Ser Tyr Lys Trp Trp Gln Lys
 210 215 220
 Tyr Gln Lys Arg Lys Phe His Cys Ala Asn Leu Thr Ser Trp Pro Arg
 225 230 235 240
 Trp Leu Tyr Ser Leu Tyr Asp Ala Glu Thr Leu Met Asp Arg Ile Lys
 245 250 255
 Lys Gln Leu Arg Glu Trp Asp Glu Asn Leu Lys Asp Asp Ser Leu Pro
 260 265 270
 Ser Asn Pro Ile Asp Phe Ser Tyr Arg Val Ala Ala Cys Leu Pro Ile
 275 280 285
 Asp Asp Val Leu Arg Ile Gln Leu Leu Lys Ile Gly Ser Ala Ile Gln
 290 295 300
 Arg Leu Arg Cys Glu Leu Asp Ile Met Asn Lys Cys Thr Ser Leu Cys
 305 310 315 320
 Cys Lys Gln Cys Gln Glu Thr Glu Ile Thr Thr Lys Asn Glu Ile Phe
 325 330 335
 Ser Leu Ser Leu Cys Gly Pro Met Ala Ala Tyr Val Asn Pro His Gly
 340 345 350
 Tyr Val His Glu Thr Leu Thr Val Tyr Lys Ala Cys Asn Leu Asn Leu
 355 360 365
 Ile Gly Arg Pro Ser Thr Glu His Ser Trp Phe Pro Gly Tyr Ala Trp
 370 375 380
 Thr Val Ala Gln Cys Lys Ile Cys Ala Ser His Ile Gly Trp Lys Phe
 385 390 395 400
 Thr Ala Thr Lys Lys Asp Met Ser Pro Gln Lys Phe Trp Gly Leu Thr

405 410 415
 Arg Ser Ala Leu Leu Pro Thr Ile Pro Asp Thr Glu Asp Glu Ile Ser
 420 425 430
 Pro Asp Lys Val Ile Leu Cys Leu
 435 440

<210> 3629
 <211> 695
 <212> DNA
 <213> Homo sapiens

<400> 3629
 acgcgtcccc tgtccggctt ggtatgggtc gcgctgctag cgctaggcca cgccttcctg
 60
 ttcaccgggg gcgtgggtgag cgctggggac caggtgtcct attttctctt cgtcatcttc
 120
 acggcgatg ccatgctgcc cttgggcatg cgggacgcgc ccgtcgcggg cctcgccctc
 180
 tcactctcgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctcacggcct
 240
 gcactgctgc cgcagttggc agcaaacgca gtgctgttcc tgtgcgggaa cgtggcagga
 300
 gtgtaccaca aggcgctgat ggagcgcgcc ctgcggggcca cgttccggga ggcactcage
 360
 tccctgcact cagccggcgc gctggacacc gagaagaagc accaggtcag ccgggcctag
 420
 gaaggtcaga gcagcgtcc gagggaggag ttgcttagat tacataacgg ggctcctcca
 480
 caagttgagt gactctgggc aggtttcttg acctgtttct tcttttgtat aaaatgtggg
 540
 tattgccccat cttagaaggt tgtgaggctc aaacaaacca aagcttataa aaagcacttt
 600
 agagcattat gatattaagt gaactcccat tcaggtgttg atactgggag tttagtcact
 660
 aaaggtgatc agtgtaggat ggagtgtgg ggcgc
 695

<210> 3630
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 3630
 Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
 1 5 10 15
 His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
 20 25 30
 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 35 40 45
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His
 50 55 60
 Leu Leu Val Leu Gly Leu Tyr Leu Gly Pro Gln Pro Asp Ser Arg Pro
 65 70 75 80
 Ala Leu Leu Pro Gln Leu Ala Ala Asn Ala Val Leu Phe Leu Cys Gly

	85		90		95
Asn Val Ala Gly Val Tyr His Lys Ala Leu Met Glu Arg Ala Leu Arg					
	100		105		110
Ala Thr Phe Arg Glu Ala Leu Ser Ser Leu His Ser Arg Arg Arg Leu					
	115		120		125
Asp Thr Glu Lys Lys His Gln Val Ser Arg Ala					
	130		135		

<210> 3631
 <211> 864
 <212> DNA
 <213> Homo sapiens

<400> 3631
 ngttgttggg atctggtaca ggtgctgagg cagatgcagg tagcatggag ccaaaaatgg
 60
 agcggctaga agagaagagg tcctggaaag gctcaaagggt gtccatgaag tccagggttag
 120
 gctgcaaagg aatcagtcctc ggctggatca tgtctgcatt tccagatgt gctatttccc
 180
 ggggattggg cctggtacat gcagtatctg gagaagcgca agaactctgt gtgccacttt
 240
 gtgacacccc tggacggctc tgtggacgta gacgagcacc gccggccgga ggccatcacc
 300
 acggaaggga agtactggaa gagccgcac gagattgtga tccggggagta tcacaagtgg
 360
 agaacctact tcaagaaaag gctacagcag cacaaggatg aggacctctc cagcctgggtc
 420
 caggacgatg acatgctgta ttggcacaag cacggggatg gatggaagac ccccgctcccc
 480
 atggaggagg atccccctgct ggacacagac atgctcatgt cggaattcag cgacaccctc
 540
 ttctccacac ttcttccaca ccagccgggtg gcctggccca atccccggga aatagcacat
 600
 ctgggaaatg cagacatgat ccagccggga ctgattcctt tgcagcctaa cctggacttc
 660
 atggacacct ttgagccttt ccaggacctc ttctcttcta gccgctccat ttttggtccc
 720
 atgctacctg catctgcctc agcacctgta ccagatccca acaaccacc tgcacaggag
 780
 agcatcctgc cgaccacagc cctccccact gtgagccttc ctgacagcct catcgcgccc
 840
 cccaccgccc catccctggc gcgc
 864

<210> 3632
 <211> 222
 <212> PRT
 <213> Homo sapiens

<400> 3632
 Met Gln Tyr Leu Glu Lys Arg Lys Asn Pro Val Cys His Phe Val Thr
 1 5 10 15
 Pro Leu Asp Gly Ser Val Asp Val Asp Glu His Arg Arg Pro Glu Ala

```

      20      25      30
Ile Thr Thr Glu Gly Lys Tyr Trp Lys Ser Arg Ile Glu Ile Val Ile
      35      40      45
Arg Glu Tyr His Lys Trp Arg Thr Tyr Phe Lys Lys Arg Leu Gln Gln
      50      55      60
His Lys Asp Glu Asp Leu Ser Ser Leu Val Gln Asp Asp Asp Met Leu
65      70      75      80
Tyr Trp His Lys His Gly Asp Gly Trp Lys Thr Pro Val Pro Met Glu
      85      90      95
Glu Asp Pro Leu Leu Asp Thr Asp Met Leu Met Ser Glu Phe Ser Asp
      100      105      110
Thr Leu Phe Ser Thr Leu Ser Ser His Gln Pro Val Ala Trp Pro Asn
      115      120      125
Pro Arg Glu Ile Ala His Leu Gly Asn Ala Asp Met Ile Gln Pro Gly
      130      135      140
Leu Ile Pro Leu Gln Pro Asn Leu Asp Phe Met Asp Thr Phe Glu Pro
145      150      155      160
Phe Gln Asp Leu Phe Ser Ser Arg Ser Ile Phe Gly Ser Met Leu
      165      170      175
Pro Ala Ser Ala Ser Ala Pro Val Pro Asp Pro Asn Asn Pro Pro Ala
      180      185      190
Gln Glu Ser Ile Leu Pro Thr Thr Ala Leu Pro Thr Val Ser Leu Pro
      195      200      205
Asp Ser Leu Ile Ala Pro Pro Thr Ala Pro Ser Leu Ala Arg
      210      215      220

```

<210> 3633
 <211> 1570
 <212> DNA
 <213> Homo sapiens

```

<400> 3633
ggatccatcac aactgctccg cctgggtggaa tctgagagga agtcacctca tgtgtcacca
60
gcagaagggc tgaagtgaca ggatgttcat tgacctgtca gtggatctga aagttctcta
120
aggagagcct gggcaagcat tcttaggttg atgctggggc ccagagtagc agtgagcatc
180
ctgtgtgaag atggcatttc tcaactgatta ttggaaaagc acaagagcca cgtgctggag
240
ccattgtcca gccttgccct ggaggagcag tgtctggcct tgtccctaga ttggtccact
300
gggaaaactg gaagggcccg ggaccagccc ttgaagatca tcagcagtga ctccacaggg
360
cagctccacc tcctgatggt gaatgagacg aggcccaggc tgcagaaagt ggccatcagg
420
caggcacatc aattcgaggc ctggattgct gctttcaatt actggcatcc agaaattgtg
480
tattcagggg ggcacgatgg cttcttgagg ggctgggaca ccagggtacc cggcaaattt
540
ctcttcacca gcnaaaagac acaccatnng ggtgtgtgca gcatccagag cagccctcat
600
cgggagcaca tcctggccac gggaagctat gatgaacaca tcctactgtg ggacacacga
660

```

aacatgaagc agccgttggc agatacgccct gtgcaggggtg gggatatggag aatcaagtgg
 720
 caccctttcc accaccacct gctcctggcc gcctgcatgc acagtggctt taagatcctc
 780
 aactgccaaa aggcaatgga ggagaggcag gaggcgacgg tcttgacatc tcacacattg
 840
 cccgactcgc tgggttatgg agccgactgg tcctggctgc tcttccgttc tctgcagcgg
 900
 gccccctcgt ggtcctttcc tagcaacctt ggaaccaaga cggcagacct gaaggggtgca
 960
 agcgaattgc caacaccctg tcatgaatgc agagaggata acgatgggga gggccatgcc
 1020
 agaccccaga gtggaatgaa gccactcaca gagggcata ggaagaatgg cacctggctg
 1080
 caggctacag cagccaccac acgtgactgt ggcgtgaacc cagaagaagc agactcagcc
 1140
 ttcagcctcc tggccacctg ctcttctat gaccatgcgc tccacctctg ggagtgggag
 1200
 gggaaactgag cttgaaatca tgaagcccct tcccacaagg aaaccaggag ggagactgcg
 1260
 agtgagtgcc cgggaccacc tcatcagaga tgcttactgc agccctgcag gtgcctgtgc
 1320
 actgatggaa tccacagtgt agtcagaaaa gctgttgact tctcttaaat cagcttcctc
 1380
 gctgggcccc tgaaagtgga ctgggtgatt ctgtctggca gagagtgggg aaaagacgcg
 1440
 gtttccagct tgcagatttg ttaagtttct caggcagatt ttgactttca gcctttcata
 1500
 cttgtttaag caactatttg tattaatatga agttttttga aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa
 1570

<210> 3634

<211> 277

<212> PRT

<213> Homo sapiens

<400> 3634

Met	Val	Asn	Glu	Thr	Arg	Pro	Arg	Leu	Gln	Lys	Val	Ala	Ser	Trp	Gln
1				5					10					15	
Ala	His	Gln	Phe	Glu	Ala	Trp	Ile	Ala	Ala	Phe	Asn	Tyr	Trp	His	Pro
		20						25					30		
Glu	Ile	Val	Tyr	Ser	Gly	Gly	Asp	Asp	Gly	Leu	Leu	Arg	Gly	Trp	Asp
		35					40					45			
Thr	Arg	Val	Pro	Gly	Lys	Phe	Leu	Phe	Thr	Ser	Xaa	Lys	Thr	His	His
	50					55					60				
Xaa	Gly	Val	Cys	Ser	Ile	Gln	Ser	Ser	Pro	His	Arg	Glu	His	Ile	Leu
65					70				75				80		
Ala	Thr	Gly	Ser	Tyr	Asp	Glu	His	Ile	Leu	Leu	Trp	Asp	Thr	Arg	Asn
			85					90				95			
Met	Lys	Gln	Pro	Leu	Ala	Asp	Thr	Pro	Val	Gln	Gly	Gly	Val	Trp	Arg
		100						105				110			
Ile	Lys	Trp	His	Pro	Phe	His	His	His	Leu	Leu	Leu	Ala	Ala	Cys	Met

115 120 125
 His Ser Gly Phe Lys Ile Leu Asn Cys Gln Lys Ala Met Glu Glu Arg
 130 135 140
 Gln Glu Ala Thr Val Leu Thr Ser His Thr Leu Pro Asp Ser Leu Val
 145 150 155 160
 Tyr Gly Ala Asp Trp Ser Trp Leu Leu Phe Arg Ser Leu Gln Arg Ala
 165 170 175
 Pro Ser Trp Ser Phe Pro Ser Asn Leu Gly Thr Lys Thr Ala Asp Leu
 180 185 190
 Lys Gly Ala Ser Glu Leu Pro Thr Pro Cys His Glu Cys Arg Glu Asp
 195 200 205
 Asn Asp Gly Glu Gly His Ala Arg Pro Gln Ser Gly Met Lys Pro Leu
 210 215 220
 Thr Glu Gly Met Arg Lys Asn Gly Thr Trp Leu Gln Ala Thr Ala Ala
 225 230 235 240
 Thr Thr Arg Asp Cys Gly Val Asn Pro Glu Glu Ala Asp Ser Ala Phe
 245 250 255
 Ser Leu Leu Ala Thr Cys Ser Phe Tyr Asp His Ala Leu His Leu Trp
 260 265 270
 Glu Trp Glu Gly Asn
 275

<210> 3635

<211> 835

<212> DNA

<213> Homo sapiens

<400> 3635

ngaattcaac ttcagcaaca gcagcaacag tcttgccaac acctgggatt actaactcct
 60
 gttggagttg gagagcagct ttctgagggg gactatgcac ggttacagca agtggatcct
 120
 gttttactta aagatgaacc ccagcagact gctgctcaga tgggttggtgc gccaatccag
 180
 cctctggcga tgctcgaagc ttgacctctg gcggcaggtc ccttgacctc aggggtccatc
 240
 gcaaatctta cagaactgca aggagtata gttggacagc cagtactggg ccaagcacag
 300
 ttggcagggc tggggcaagg aattctgaca gaaacacaac aagggttaat ggtagccagc
 360
 cctgctcaga ccctcaatga cacgctggat gacatcatgg cagcagtcag tggaagagca
 420
 tctgcaatgt caaacactcc taccacagat attgctgcat ccatttccca acctcagact
 480
 ccaactccaa gtccatcat ctctcttca gccatgcttc ctatctacc tgccattgat
 540
 attgatgcac agactgagag taatcatgac acggcgctaa cacttgctg tgctgggtggc
 600
 cagaggaac tggtaacaac actgctagag agaggagcta gtatagagca ccgagacaag
 660
 aaaggtttta ctccactcat cttggctgcc acagctggtc atgttggtgt tgtggaaata
 720
 ttgctggaca atggtgcaga cattgaagcc cagtctgaaa gaaccaagga cacaccactc
 780

tccttggtt gttctggggg aagacaggag gtggtggagc tattgttagc tcgag
835

<210> 3636

<211> 278

<212> PRT

<213> Homo sapiens

<400> 3636

Xaa Ile Gln Leu Gln Gln Gln Gln Ser Cys Gln His Leu Gly
1 5 10 15
Leu Leu Thr Pro Val Gly Val Gly Glu Gln Leu Ser Glu Gly Asp Tyr
20 25 30
Ala Arg Leu Gln Gln Val Asp Pro Val Leu Leu Lys Asp Glu Pro Gln
35 40 45
Gln Thr Ala Ala Gln Met Gly Cys Ala Pro Ile Gln Pro Leu Ala Met
50 55 60
Pro Gln Ala Leu Pro Leu Ala Ala Gly Pro Leu Pro Pro Gly Ser Ile
65 70 75 80
Ala Asn Leu Thr Glu Leu Gln Gly Val Ile Val Gly Gln Pro Val Leu
85 90 95
Gly Gln Ala Gln Leu Ala Gly Leu Gly Gln Gly Ile Leu Thr Glu Thr
100 105 110
Gln Gln Gly Leu Met Val Ala Ser Pro Ala Gln Thr Leu Asn Asp Thr
115 120 125
Leu Asp Asp Ile Met Ala Ala Val Ser Gly Arg Ala Ser Ala Met Ser
130 135 140
Asn Thr Pro Thr His Ser Ile Ala Ala Ser Ile Ser Gln Pro Gln Thr
145 150 155 160
Pro Thr Pro Ser Pro Ile Ile Ser Pro Ser Ala Met Leu Pro Ile Tyr
165 170 175
Pro Ala Ile Asp Ile Asp Ala Gln Thr Glu Ser Asn His Asp Thr Ala
180 185 190
Leu Thr Leu Ala Cys Ala Gly Gly His Glu Glu Leu Val Gln Thr Leu
195 200 205
Leu Glu Arg Gly Ala Ser Ile Glu His Arg Asp Lys Lys Gly Phe Thr
210 215 220
Pro Leu Ile Leu Ala Ala Thr Ala Gly His Val Gly Val Val Glu Ile
225 230 235 240
Leu Leu Asp Asn Gly Ala Asp Ile Glu Ala Gln Ser Glu Arg Thr Lys
245 250 255
Asp Thr Pro Leu Ser Leu Ala Cys Ser Gly Gly Arg Gln Glu Val Val
260 265 270
Glu Leu Leu Leu Ala Arg
275

<210> 3637

<211> 2128

<212> DNA

<213> Homo sapiens

<400> 3637

nacgcgtgcg atccccggcg cccgcgcgcg cccatagcgc tccgccagag ctgccgccgc
60

ggactcgccg ggagtggggg tctccgctgg tgccagcccg cttctggaga ccctccgcct
120
cctgccaaacc cctgctcttc caggtcgggc cccggggttc tgcggctgtt agggacagag
180
gcaaagaagg gcaggacggt ccggtttccc gtggatgttc ccgcccgaga aagacagcaa
240
gttgtgtgtg cgcgggggac gcgggagggg aggtagccgc cgcggccag ccatggacca
300
tcactcttag tgcagaggat ggaaagtga tgcccagtaa gactgaagat ccattctgca
360
ttacggaaact gtggattatc tgtgggtccc tggtgatttc acaccttcac tcaactcctgc
420
agtccctgaa cacttacttg gggtcctcat tgccctatct ggtgaaagat ggcatccagc
480
ctgacttgta ctggagtaat ctgggctttg ctgtcttttc tttgtgctgc cacctcctgc
540
gtgggggttct ttatgcctta ctggctctgg ggatcacagc tgggcaagcc tgtgtccttc
600
ggtaccttcc ggaggtgctc atatcctgtg catgatgaga gtccgcagat gatggtgatg
660
gtggagggaat gtgggcgcta tgcctccttc cagggcatcc ccagcgcaga atggaggatc
720
tgcaccatag tgaccggcct gggttgtggc ctctcctcc tggtggcgt cactgcctcc
780
atgggttgct gtgtttccga cctcatctcc aggacagtgg gaagagtggc tggaggaatt
840
cagtttcttg ggggcttgtt gattggtgct ggctgtgccc tctacctctt gggctgggac
900
agtgaggaag tccggcagac ttgtggctac acttctggcc agtttgacct ggggaagtgt
960
gaaatcggct gggcctacta ctgcacggga gcaggtgcca ctgccgccat gctgctgtgc
1020
acgtgggctgg ctgtcttttc gggcaagaaa cagaagcact acccactctg agatggagct
1080
accaagagca gacagaggag aagatgggccc aaaggggctt ggagagggtca aaacatccac
1140
ctaccttcaa aaggtgggat agtagttcta atccaatata atgctaataa aatgaaaccc
1200
gataaaatca ggaacatgat ataggaagga aggattgtag gagatttgtg ggggaaaaaa
1260
aaggagagta tagaatgatg gagaaaaatg gaccaaaggc taaaaatatt gcagggcac
1320
gggtgtttct attccacaga gtattgttaa tgtacaacac acacacacac acacacacac
1380
acacacacac acacacacaa caaatctaca tatacaaaca agggtttggg ttttagtttt
1440
ttttttttaa ggtgaggact cagaaaatca aagggttagt agaaacagtg ttatgttggg
1500
aagcaaggta ccccaaaga tgttcctgt aggtcacggc actcccaaaa gcacacaagc
1560
acatacagac atatgcatcc ccacacacgc ctatgcacaa acgtggatta tcgcacagac
1620
tgggaggttt agtgggtgat ttctcctctg ttttcttttt aatatacatt taaaatacag
1680

tattatcact ttataaaaca tacattaagc ctaataaatg gaccaataag ccaaactatc
 1740
 agtattttgt atatcctgca taaactctaa tttagttcct caacatattt tcagtgttta
 1800
 tgcagacctt tagagttaag cctttgtatt tccatgttat tccacaatat gcaatatttc
 1860
 tctgagtagc tctgtctatg atattcttat gaagaaaagg ggcaactttc tgtccactat
 1920
 aggagagaat tcagccgaag atatgagagt aatgagagac attttccagt cattggatcg
 1980
 tgttttcttt tgtccattat tgtactgtgc tgtaccacat ttatttctat attcattttg
 2040
 taaaaaattt aaaagtgcta ttttgtttgt atttgaaaat ctctgtgaat aaattctctc
 2100
 tttgatcaat aaaaaaaaaa aaaaaaaaaa
 2128

<210> 3638
 <211> 200
 <212> PRT
 <213> Homo sapiens

<400> 3638
 Met Ala Ser Ser Leu Thr Cys Thr Gly Val Ile Trp Ala Leu Leu Ser
 1 5 10 15
 Phe Leu Cys Ala Ala Thr Ser Cys Val Gly Phe Phe Met Pro Tyr Trp
 20 25 30
 Leu Trp Gly Ser Gln Leu Gly Lys Pro Val Ser Phe Gly Thr Phe Arg
 35 40 45
 Arg Cys Ser Tyr Pro Val His Asp Glu Ser Arg Gln Met Met Val Met
 50 55 60
 Val Glu Glu Cys Gly Arg Tyr Ala Ser Phe Gln Gly Ile Pro Ser Ala
 65 70 75 80
 Glu Trp Arg Ile Cys Thr Ile Val Thr Gly Leu Gly Cys Gly Leu Leu
 85 90 95
 Leu Leu Val Ala Leu Thr Ala Leu Met Gly Cys Cys Val Ser Asp Leu
 100 105 110
 Ile Ser Arg Thr Val Gly Arg Val Ala Gly Gly Ile Gln Phe Leu Gly
 115 120 125
 Gly Leu Leu Ile Gly Ala Gly Cys Ala Leu Tyr Pro Leu Gly Trp Asp
 130 135 140
 Ser Glu Glu Val Arg Gln Thr Cys Gly Tyr Thr Ser Gly Gln Phe Asp
 145 150 155 160
 Leu Gly Lys Cys Glu Ile Gly Trp Ala Tyr Tyr Cys Thr Gly Ala Gly
 165 170 175
 Ala Thr Ala Ala Met Leu Leu Cys Thr Trp Leu Ala Cys Phe Ser Gly
 180 185 190
 Lys Lys Gln Lys His Tyr Pro Tyr
 195 200

<210> 3639
 <211> 726
 <212> DNA
 <213> Homo sapiens

<400> 3639

attcggcacg agattctgga caatttttct ttatacttta atgagtgtgc gtttctctta
 60
 aagaataage tttaatatat atacacccat aataccttca aatacatttt taagcactta
 120
 aagactaaca gtggttatct ctcagcggga ttataaatgt tttggttttt tttttttttt
 180
 tgtacatttt agtatttttt gaaatttttt taataagcgt gtattacata cagtaaacia
 240
 aagcacatta atgtaggcag attatcaatg ttatgcattt cactgattgc atatctcttt
 300
 ttttatcaat ggtgaacatt gcaaatgatt gatacgtttt tcttaggaag tggcattgcc
 360
 acaaatgggt tttccaacac cagcagggcc tgagagtgtc atcaccatac actcttgccg
 420
 gcaataaaaa aatttcacct tttaatggat ttaaaagga aaagttgggg tgttgggttc
 480
 tccagggcat ttctttcatt atgagtgaca tttttctgaa aggaacgtga tctcgttttc
 540
 tagccgatg aagcatttct ccaacaagac ccactgtacc agtcttgga tctccacacc
 600
 tgtgccttct ccctgctctt tctaggtcct gattctcacc tctgctgtg taataaccct
 660
 gtcatttctc ccttatccca gttccatgtc tgtgacaagc ttggaggccg agttgcaagc
 720
 taagat
 726

<210> 3640

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3640

Met Leu His Ala Ala Arg Lys Arg Asp His Val Pro Phe Arg Lys Met
 1 5 10 15
 Ser Leu Ile Met Lys Glu Met Pro Trp Arg Thr Gln His Pro Asn Phe
 20 25 30
 Ser Leu Leu Asn Pro Leu Lys Gly Glu Ile Phe Leu Leu Pro Ala Arg
 35 40 45
 Val Tyr Gly Asp Asp Thr Leu Arg Pro Cys Trp Cys Trp Lys Asn His
 50 55 60
 Leu Trp Gln Cys His Phe Leu Arg Lys Thr Tyr Gln Ser Phe Ala Met
 65 70 75 80
 Phe Thr Ile Asp Lys Lys Arg Asp Met Gln Ser Val Lys Cys Ile Thr
 85 90 95
 Leu Ile Ile Cys Leu His
 100

<210> 3641

<211> 455

<212> DNA

<213> Homo sapiens

<400> 3641
 gtgcaccagc tatggcgagc ccgctcgctc tcgccccttc ccgcccagcg ggccaactgc
 60
 cgcgggggcg ggcggggcgt gcggctcccg gaggcgagga aatgtcgag agccccgagg
 120
 agtccccgag cagtcacgag agccgggacc ttgccccgct ggaacgcaga agcggccgtg
 180
 gagctcgaga cgctcgcgcg ctcacctcct gggcccctgt gcgtggggaa gtcaggaaga
 240
 agacgcccag tgaggtcacg gtgcccacga ggggtgattc ccctcggcct gaccacgcca
 300
 ggaggtggcc gaagggaaga ggggtgggca ggggctgctc tgcacctct agcagagcgg
 360
 catccctgca ggtgtttgct ctggcgagga gaagccccag agagcagttc gggactgtgc
 420
 ggattggctt tagggagcca gcttttaaaa cgcgt
 455

<210> 3642
 <211> 148
 <212> PRT
 <213> Homo sapiens

<400> 3642
 Met Ala Gln Pro Leu Val Leu Ala Pro Ser Arg Arg Pro Gly Gln Leu
 1 5 10 15
 Pro Arg Gly Arg Ala Gly Gly Ala Ala Pro Gly Gly Glu Glu Met Ser
 20 25 30
 Gln Ser Pro Glu Glu Ser Arg Ser Ser His Ala Ser Arg Asp Leu Ala
 35 40 45
 Pro Leu Glu Arg Arg Ser Gly Arg Gly Ala Arg Asp Ala Arg Ala Leu
 50 55 60
 Thr Ser Trp Ala Pro Val Arg Gly Glu Val Arg Lys Lys Thr Pro Ser
 65 70 75 80
 Glu Val Thr Val Pro Thr Arg Val Asp Ser Pro Arg Pro Asp His Ala
 85 90 95
 Arg Arg Trp Pro Lys Gly Arg Gly Trp Gly Arg Gly Cys Ser Ala Pro
 100 105 110
 Ser Ser Arg Ala Ala Ser Leu Gln Val Phe Ala Leu Ala Arg Arg Ser
 115 120 125
 Pro Arg Glu Gln Phe Gly Thr Val Arg Ile Gly Phe Arg Glu Pro Ala
 130 135 140
 Phe Lys Thr Arg
 145

<210> 3643
 <211> 2243
 <212> DNA
 <213> Homo sapiens

<400> 3643
 nngggtatag agtctccctg gcccataata ggtctccact attggctggt ggagcgcttc
 60

ttcaagatct tcccactgct gggtttgcac gaggagggat taagaaagtt ctcgaggtac
120
ctttgcaagc aggtggccag taaagctgag gagaatctgc tcatggtgct ggggacagac
180
atgagtgtac ggagagctgc agtcatcttt gcagatacac ttactcttct gtttgaaggg
240
attgcccgc tttgtggagac ccaccagcca atagtggaga cctattatgg gccagggaga
300
ctctataccc tgatcaaata tctgcagggtg gaatgtgaca gacaggtgga gaaggtggta
360
gacaagttca tcaagcaaag ggactaccac cagcagttcc ggcattgtca gaacaacctg
420
atgagaaatt ctacaacaga aaaaatcgaa ccaagagaac tggaccccat cctgactgag
480
gtcaccctga tgaatgcccg cagtgtgcta tactttacgt tcctcaagaa gaggattagc
540
tctgattttg aggtgggaga ctccatggcc tcagaggaag taaagcaaga gcaccagaag
600
tgtctggaca aactcctcaa taactgcctt ttgagctgta ccatgcagga gctaattggc
660
ttatatgtta ccatggagga gtacttcatg agggagactg tcaataaggc tgtggctctg
720
gacacctatg agaagggcca gctgacatcc agcatggtgg atgatgtctt ctacattgtt
780
aagaagtga tttggcgggc tctgtccagc tccagcattg actgtctctg tgccatgac
840
aacctcgcca ccacagagct ggagtctgac ttcagggatg ttctgtgtaa taagctgcgg
900
atgggctttc ctgccaccac cttccaggac atccagcgcg gggtgacaag tgccgtgaac
960
atcatgcaca gcagcctcca gcaaggcaaa ttgacacaa aaggcatcga gactactgac
1020
gaggcgaaga tgcctttcct ggtgactctg aacaacgtgg aagtctgcag tgaaaacatc
1080
tccactctga agaagacact ggagagtgc tgcaccaagc tcttcagcca gggcattgga
1140
ggggagcagg cccaggccaa gtttgacagc tgcctttctg acttggccgc cgtgtccaac
1200
aaattccgag acctcttgca ggaagggctg acggagctca acagcacagc catcaagcca
1260
caggtgcagc cttggatcaa cagctttttc tccgtctccc acaacatcga ggaggaagaa
1320
ttcaatgact atgaggccaa cgacccttgg gtacaacagt tcatecttaa cctggagcag
1380
caaattggcag agttcaaggc cagcctgtcc ccggtcatct acgacagcct aaccggcctc
1440
atgactagcc ttgttgccgt cgagttggag aaagtgggtg tgaaatccac ctttaaccgg
1500
ctgggtggtc tgcagtttga caaggagctg aggtcactca ttgcctacct taccaggtg
1560
accacctgga ccattccgaga caagtttgcc cggtctctcc agatggccac catcctcaat
1620
ctggagcggg tgaccgagat cctcgattac tggggaccca attccggccc attgacgtgg
1680

cgctcacc cgtgctgaagt gcgccaggtg ctggccctgc ggatagactt ccgcagtga
 1740
 gatatacaaga ggctgcgcct gtagctgcct ggatgagcac acctggctca tcacacttgc
 1800
 aggcctgttc cctaaggggc cccagccaag gagctgagcg aggctgtctg gcttggggga
 1860
 gatctgacag cccagacctt tctacggctg gcagcagaga aacaaagtct ggacccactc
 1920
 catgctctgc cctcagacct ggccaggtga tgctctgggg gcagcatctc cccaccgaga
 1980
 gaagcgggct cctaagtagg tgggaaagcc acggcaggca gcgagcagcc caggccagct
 2040
 ttctgcatgg atggtcagtc tcttgcctc aaacactaca gcaaacaaagc tacccttgc
 2100
 agtcctagac aacttgggta catctgggga cctagcagtt aggcttgact ttgaggagag
 2160
 gctgtgatgt ttatgatccc tgaataaagc tactccttgg agaaaaaaaa aaaaaaaaaa
 2220
 aaaaaaaaaa aaaaaaaaaa aaa
 2243

<210> 3644

<211> 560

<212> PRT

<213> Homo sapiens

<400> 3644

Gly	Leu	His	Glu	Gly	Leu	Arg	Lys	Phe	Ser	Glu	Tyr	Leu	Cys	Lys
1			5				10					15		
Gln	Val	Ala	Ser	Lys	Ala	Glu	Glu	Asn	Leu	Leu	Met	Val	Leu	Gly
		20					25					30		
Asp	Met	Ser	Asp	Arg	Arg	Ala	Ala	Val	Ile	Phe	Ala	Asp	Thr	Leu
		35				40					45			
Leu	Leu	Phe	Glu	Gly	Ile	Ala	Arg	Ile	Val	Glu	Thr	His	Gln	Pro
	50				55				60					
Val	Glu	Thr	Tyr	Tyr	Gly	Pro	Gly	Arg	Leu	Tyr	Thr	Leu	Ile	Lys
65					70				75				80	
Leu	Gln	Val	Glu	Cys	Asp	Arg	Gln	Val	Glu	Lys	Val	Val	Asp	Lys
			85					90					95	
Ile	Lys	Gln	Arg	Asp	Tyr	His	Gln	Gln	Phe	Arg	His	Val	Gln	Asn
		100						105					110	
Leu	Met	Arg	Asn	Ser	Thr	Thr	Glu	Lys	Ile	Glu	Pro	Arg	Glu	Leu
		115					120					125		
Pro	Ile	Leu	Thr	Glu	Val	Thr	Leu	Met	Asn	Ala	Arg	Ser	Glu	Leu
	130					135					140			
Leu	Arg	Phe	Leu	Lys	Lys	Arg	Ile	Ser	Ser	Asp	Phe	Glu	Val	Gly
145					150					155				160
Ser	Met	Ala	Ser	Glu	Glu	Val	Lys	Gln	Glu	His	Gln	Lys	Cys	Leu
			165					170					175	
Lys	Leu	Leu	Asn	Cys	Leu	Leu	Ser	Cys	Thr	Met	Gln	Glu	Leu	Ile
		180					185					190		
Gly	Leu	Tyr	Val	Thr	Met	Glu	Glu	Tyr	Phe	Met	Arg	Glu	Thr	Val
	195					200						205		
Lys	Ala	Val	Ala	Leu	Asp	Thr	Tyr	Glu	Lys	Gly	Gln	Leu	Thr	Ser

```

      210              215              220
Met Val Asp Asp Val Phe Tyr Ile Val Lys Lys Cys Ile Gly Arg Ala
225              230              235              240
Leu Ser Ser Ser Ser Ile Asp Cys Leu Cys Ala Met Ile Asn Leu Ala
      245              250              255
Thr Thr Glu Leu Glu Ser Asp Phe Arg Asp Val Leu Cys Asn Lys Leu
      260              265              270
Arg Met Gly Phe Pro Ala Thr Thr Phe Gln Asp Ile Gln Arg Gly Val
      275              280              285
Thr Ser Ala Val Asn Ile Met His Ser Ser Leu Gln Gln Gly Lys Phe
      290              295              300
Asp Thr Lys Gly Ile Glu Ser Thr Asp Glu Ala Lys Met Ser Phe Leu
305              310              315              320
Val Thr Leu Asn Asn Val Glu Val Cys Ser Glu Asn Ile Ser Thr Leu
      325              330              335
Lys Lys Thr Leu Glu Ser Asp Cys Thr Lys Leu Phe Ser Gln Gly Ile
      340              345              350
Gly Gly Glu Gln Ala Gln Ala Lys Phe Asp Ser Cys Leu Ser Asp Leu
      355              360              365
Ala Ala Val Ser Asn Lys Phe Arg Asp Leu Leu Gln Glu Gly Leu Thr
      370              375              380
Glu Leu Asn Ser Thr Ala Ile Lys Pro Gln Val Gln Pro Trp Ile Asn
385              390              395              400
Ser Phe Phe Ser Val Ser His Asn Ile Glu Glu Glu Glu Phe Asn Asp
      405              410              415
Tyr Glu Ala Asn Asp Pro Trp Val Gln Gln Phe Ile Leu Asn Leu Glu
      420              425              430
Gln Gln Met Ala Glu Phe Lys Ala Ser Leu Ser Pro Val Ile Tyr Asp
      435              440              445
Ser Leu Thr Gly Leu Met Thr Ser Leu Val Ala Val Glu Leu Glu Lys
      450              455              460
Val Val Leu Lys Ser Thr Phe Asn Arg Leu Gly Gly Leu Gln Phe Asp
465              470              475              480
Lys Glu Leu Arg Ser Leu Ile Ala Tyr Leu Thr Thr Val Thr Thr Trp
      485              490              495
Thr Ile Arg Asp Lys Phe Ala Arg Leu Ser Gln Met Ala Thr Ile Leu
      500              505              510
Asn Leu Glu Arg Val Thr Glu Ile Leu Asp Tyr Trp Gly Pro Asn Ser
      515              520              525
Gly Pro Leu Thr Trp Arg Leu Thr Pro Ala Glu Val Arg Gln Val Leu
      530              535              540
Ala Leu Arg Ile Asp Phe Arg Ser Glu Asp Ile Lys Arg Leu Arg Leu
545              550              555              560

```

<210> 3645

<211> 823

<212> DNA

<213> Homo sapiens

<400> 3645

```

acgcgtacat gggcaggtgg tagcggttat agtgcaggta gtcaagagtg cttctctcca
60
ccagggtttt gtagatggat tcctcaaaaa ctcttttgag gtattgcctg ggcttctcag
120

```

tcgggttgat ttcctcatct tctatttgat gggctaactg ctctatggaa ggaagatctt
 180
 cctcctcctt ggaggctaag atttggcgta actctttcct gagatcaata aaacgatcgt
 240
 ggaacagggc caggcaccac ggctcgggtga agtagctata gagatctgtg atcagggtttt
 300
 catcgtaaccg agcacacagg ttgttgagga gttgctcgtg ctggccaaac aagcggatgt
 360
 agttggaggc ggggaagggc tccctagaaa ggcacgtgat ggtttccacc attttatact
 420
 tgtaatatg aattcggaag taagtcccat ttttcgcact gccggttact agttctaaac
 480
 cataattagg ctgggccatt tgtacctcca agggagttgg aatggcaggc ttggcaatat
 540
 gcagataatg gtaagacca ggaagaatgc ccccttgaat cttggctccc ttgtacatgg
 600
 ggatgagccg gtcaagatta gctggtggct cggtcacagg ctcaaggggt ggatcaaaga
 660
 gatgtagcat agctgctgcc agctgaaagc caatttcttt ggaactgaag ttgctggtgg
 720
 gccattcat ttgagtagta tctattggag aatttgggtga gggagccagc agctctgatg
 780
 gctatgctgt tgggtgggaa gttggtatca atcacaagtc gac
 823

<210> 3646

<211> 243

<212> PRT

<213> Homo sapiens

<400> 3646

Met	Asn	Gly	Pro	Thr	Ser	Asn	Phe	Ser	Ser	Lys	Glu	Ile	Gly	Phe	Gln
1				5					10					15	
Leu	Ala	Ala	Ala	Met	Leu	His	Leu	Phe	Asp	Pro	Thr	Leu	Glu	Pro	Val
			20					25					30		
Thr	Glu	Pro	Pro	Ala	Asn	Leu	Asp	Arg	Leu	Ile	Pro	Met	Tyr	Lys	Gly
		35				40					45				
Ala	Lys	Ile	Gln	Gly	Gly	Ile	Leu	Pro	Gly	Ser	Tyr	His	Tyr	Leu	His
	50					55					60				
Ile	Ala	Lys	Pro	Ala	Ile	Pro	Thr	Pro	Leu	Glu	Val	Gln	Met	Ala	Gln
65					70				75				80		
Pro	Asn	Tyr	Gly	Leu	Glu	Leu	Val	Thr	Gly	Ser	Ala	Lys	Asn	Gly	Thr
			85					90					95		
Tyr	Phe	Arg	Ile	His	Ile	Asn	Lys	Tyr	Lys	Met	Val	Glu	Thr	Ile	Thr
		100					105						110		
Cys	Leu	Ser	Arg	Glu	Pro	Phe	Pro	Ala	Ser	Asn	Tyr	Ile	Arg	Leu	Phe
		115					120					125			
Gly	Gln	His	Glu	Gln	Leu	Leu	Asn	Asn	Leu	Cys	Ala	Arg	Tyr	Asp	Glu
	130				135						140				
Asn	Leu	Ile	Thr	Asp	Leu	Tyr	Ser	Tyr	Phe	Thr	Glu	Pro	Trp	Cys	Leu
145				150					155				160		
Ala	Leu	Phe	His	Asp	Arg	Phe	Ile	Asp	Leu	Arg	Lys	Glu	Leu	Arg	Gln
			165					170					175		
Ile	Leu	Ala	Ser	Lys	Glu	Glu	Glu	Asp	Leu	Pro	Ser	Ile	Glu	Gln	Leu

	180		185		190										
Ala	His	Gln	Ile	Glu	Asp	Glu	Glu	Ile	Asn	Pro	Thr	Glu	Lys	Pro	Arg
	195					200				205					
Gln	Tyr	Leu	Lys	Arg	Val	Phe	Glu	Glu	Ser	Ile	Tyr	Lys	Thr	Leu	Val
	210					215				220					
Glu	Arg	Ser	Thr	Leu	Asp	Tyr	Leu	His	Tyr	Asn	Arg	Tyr	His	Leu	Pro
225				230					235					240	
Met	Tyr	Ala													

<210> 3647
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 3647
 acgcgtcggg cgagcgccgc gcctacgggc ccttttttct gcgcgaccgc gtggctgtgg
 60
 gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgccg
 120
 acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgcccgc
 180
 tcttcacct gacggtcgcc gaacccacg cggagccgcc ccccggggc tctccgggca
 240
 acggctccag ccacagcggc gcccagggc caggtgaagg aggcctccct gggacccggg
 300
 aaggcgggag cccacccac cgggggttgc tctgcgccg ctgtcccttg cccgaggccc
 360
 gcggatccca gcgggnnggc cgtggcccgc gtcggggcgc aggtcttgct ggtacctgac
 420
 gccgtccga ccccgcttc cccgcagacc ccacactggc gcgcggccac aacgtcatca
 480
 atgtcatcgt ccccgagagc cgagcccact tcttcagca gctgggctac gtgctggcca
 540
 cgctgctgct cttcatcctg ctactgttca ctgtcctect ggcc
 584

<210> 3648
 <211> 63
 <212> PRT
 <213> Homo sapiens

Thr	Arg	Arg	Ala	Ser	Ala	Ala	Pro	Thr	Gly	Pro	Phe	Phe	Cys	Ala	Thr
1			5				10				15				
Ala	Trp	Leu	Trp	Ala	Arg	Met	Pro	Leu	Ser	Ala	Val	Thr	Ser	His	Cys
		20					25				30				
Val	Ser	Ser	Arg	Trp	Arg	Ser	Pro	Thr	Arg	Ala	Pro	Thr	Pro	Ala	Thr
	35					40				45					
Cys	Thr	Thr	Ile	Thr	Val	Ala	Cys	Thr	Asn	Ala	Ala	Ser	Ser	Thr	
50					55					60					

<210> 3649
 <211> 648

<212> DNA

<213> Homo sapiens

<400> 3649

naaaaaataat gcagacataa aatgaaaaaa gattgaagat tgttacagag aaatagggtga
60
ggaagcatga tactgaaggc ttgtcactcc tgttttcact tccacacaga caagcatatt
120
tgctcattgt ttgctgtgct cccctttttt tttcagggtg ctattttctgc agatgtcaaa
180
gaagttctgt taactgatgg gaatgaaaag gccatcagaa atgtgcaaga catcatcaca
240
aggaatcaga aggctgggtg gtttaagacc cagaaaatat caagctgcgt tttacgatgg
300
gataatgaga cagatgtctc tcaactggaa ggacattttg acattgttat gtgtgctgac
360
tgctgttttc tggaccagta cagagccagc cttgttgatg caataaagag attactccag
420
cccaggggga aagcgatggg atttgcccca cgccgaggga atactttaaa ccagtttttg
480
aatctagctg aaaaagctgg tttctgtatc caaagacatg aaaattatga tgaacacatt
540
tcaaacttcc actccaagtt gaaaaaggaa aaccggaca tatatgaaga aaaccttcac
600
taccgcctc tgcttatatt gaccaaacat ggatagaaga ttaagctt
648

<210> 3650

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3650

Met	Ile	Leu	Lys	Ala	Cys	His	Ser	Cys	Phe	His	Phe	His	Thr	Asp	Lys
1				5					10					15	
His	Ile	Cys	Ser	Leu	Phe	Ala	Val	Leu	Pro	Phe	Phe	Phe	Gln	Val	Ala
			20					25					30		
Ile	Ser	Ala	Asp	Val	Lys	Glu	Val	Leu	Leu	Thr	Asp	Gly	Asn	Glu	Lys
		35					40					45			
Ala	Ile	Arg	Asn	Val	Gln	Asp	Ile	Ile	Thr	Arg	Asn	Gln	Lys	Ala	Gly
	50				55						60				
Val	Phe	Lys	Thr	Gln	Lys	Ile	Ser	Ser	Cys	Val	Leu	Arg	Trp	Asp	Asn
65				70					75					80	
Glu	Thr	Asp	Val	Ser	Gln	Leu	Glu	Gly	His	Phe	Asp	Ile	Val	Met	Cys
			85					90					95		
Ala	Asp	Cys	Leu	Phe	Leu	Asp	Gln	Tyr	Arg	Ala	Ser	Leu	Val	Asp	Ala
		100					105					110			
Ile	Lys	Arg	Leu	Leu	Gln	Pro	Arg	Gly	Lys	Ala	Met	Val	Phe	Ala	Pro
	115					120					125				
Arg	Arg	Gly	Asn	Thr	Leu	Asn	Gln	Phe	Cys	Asn	Leu	Ala	Glu	Lys	Ala
	130				135						140				
Gly	Phe	Cys	Ile	Gln	Arg	His	Glu	Asn	Tyr	Asp	Glu	His	Ile	Ser	Asn
145				150					155				160		
Phe	His	Ser	Lys	Leu	Lys	Lys	Glu	Asn	Pro	Asp	Ile	Tyr	Glu	Glu	Asn

	165	170	175
Leu His Tyr Pro Pro Leu Leu Ile Leu Thr Lys His Gly			
	180	185	
<210> 3651			
<211> 2469			
<212> DNA			
<213> Homo sapiens			
<400> 3651			
ggctgtaccg gaacgtgggg cgaggcgctg ttcatacaag aaaaagggtt cttttggtca			
60			
cccaccactg gcccatgggc tgccgtgcag atggatcctg agctagccaa gcgcctcttc			
120			
tttgaagggg ccactgtggg catcctgaac atgcccagg gaacagagtt tgggattgac			
180			
tataactcct gggaggtcgg gcccaagttc cggggcggtga agatgatccc tccaggcatc			
240			
cacttctctc actacagctc tgtggacaag gctaatacga aggaagtagg ccctcgtatg			
300			
ggtttctctc ttagcctgca ccagcggggg ctgacagtgc tgcgctggag cacactcagg			
360			
gaagaggtag acctgtcccc agcccagag tctgaggtgg aggccatgag ggccaacctc			
420			
caggagctgg accagttcct ggggccttac ccatatgcca ccctgaagaa gtggatctca			
480			
ctcaccaact tcatcagcga agccacagtg gagaagctac agcccagaaa tcgacagatc			
540			
tgtgcctttt ccgatgtgct acctgtgctc tccatgaagc acaccaagga ccgcgtgggg			
600			
cagaatctac cccgctgtgg cattgagtgc aaaagctacc aagagggcct ggcccggcta			
660			
ccagagatga agcccagagc cgggacagag atccgcttct cagagctgcc cagcagatg			
720			
ttcccagagg gtgccacgcc agctgagata accaagcaca gcatggacct gagctatgcc			
780			
ctggagactg tgctcatcaa gcagttcccc agcagccccc aggatgtgct tgggtgaactc			
840			
cagtttgctt ttgtgtgctt cctgctgggg aatgtgtacg aggcatttga gcattggaag			
900			
cggtctctgc acctcctgtg ccggtcagaa gcagccatga tgaagcacca caccctctac			
960			
atcaacctca tgtocatcct gtaccaccag ctgtgtgaga tccccgctga cttcttcgta			
1020			
gacattgtct cccaagacaa ctctctcacc agcaccttac aggttttctt ttcctctgcc			
1080			
tgcagcattg ccgtggatgc caccctgaga aagaaagctg aaaagttcca agctcacctg			
1140			
accaagaagt tccggtggga ctttgctgcg gaacctgagg actgtgcccc ggtgggtggtg			
1200			
gagctccctg agggcatcga gatgggctaa ctcggggagc gctctcagct gcgagggggc			
1260			
cttcccaca gggctgcagt cctggcctct ccatttactt ctteccatcc tgggacctgc			
1320			

cagggcagca atctctccag gtcctgcaaa gatggagcca gaattccctt tttcactgat
 1380
 aaatatatattt cttcattgcc aaagaggctg tacccatcct gaaggcacat ttgtgggttc
 1440
 cccatcagcc aggccttggt gctaacctgg ctgaatttca cacaggtctt tacacacaca
 1500
 cgctcctagg agacatctgc ctacacggca accatatttc ctctgaatga gaaggaattg
 1560
 aaccaaagt ccaagaaaga actgattggt tgttccatag gagcttagga aacaagaaac
 1620
 cctggattgc ccaggggggc tgagaagttg gttgggtgact ttttttcggt ttaaatgaag
 1680
 ggtgatgggg agatcagccc gaattgccgc ctgcctcttg ctaaatagga gcagaggact
 1740
 tggcctgcag ctcttggga gcccttgatt gggaagagag tttcaaggga ggcagctgga
 1800
 ttcaatctag caggtgtgca gcttcagctt tctccatcga aatccattc tcctgtccag
 1860
 agggccagtg ggtcatctcc caaggtgggt gtggacctg gccctcagagg ccttgcctgt
 1920
 gctgtcacct cccacctgtt ccattccgag gccctacca gaagtgggac cctcccttc
 1980
 ctaccagag ccaccgtgac tgtttctgat gacctggaga gtcaacaaca accagaaagg
 2040
 tttctgcccc gagcaggctt ctttaaggcct ttacgaagtt ttgtgccttc caagtgtga
 2100
 agaagacctg gtcagcctaa atcttccag tcccgtgtg gagctgtcag tcaccggagt
 2160
 aatgagctcc tggttcctcg ggagtccttc gtgctgtgtg gcagggttcc tctctagaca
 2220
 agtacacagg cctgccacc ctgacatcaa actgttgtac tatgatcaca gtccctgtgc
 2280
 catecttttc caagactggg gctcacacca tgtttttgaa tgagaatccc tgctggttga
 2340
 gacttttget tccacttgtt tccttgaga tgtttttcca agagcataat gtacattaaa
 2400
 gtcttcgagt tgagacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2460
 aaaaaaaaaa
 2469

<210> 3652

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3652

Met	Ala	Ala	Val	Gln	Met	Asp	Pro	Glu	Leu	Ala	Lys	Arg	Leu	Phe	Phe
1				5				10					15		
Glu	Gly	Ala	Thr	Val	Val	Ile	Leu	Asn	Met	Pro	Lys	Gly	Thr	Glu	Phe
				20				25					30		
Gly	Ile	Asp	Tyr	Asn	Ser	Trp	Glu	Val	Gly	Pro	Lys	Phe	Arg	Gly	Val
				35				40				45			
Lys	Met	Ile	Pro	Pro	Gly	Ile	His	Phe	Leu	His	Tyr	Ser	Ser	Val	Asp

```
<210> 3653
<211> 283
<212> DNA
<213> Homo sapiens
```

```
<400> 3653
ncaaagagca aggggtggatg cccagggcc a gccaggagc ttggcgccac tggaggaagt
60
gcattataacc aatcagagct tcttttgcctg ctgctgaaat ggaacggtgc catcaggccg
120
tcttctccac tggagatgct ccttcagctc agcaggacgc tagctcggaa ctcagactgc
180
```

acatttttgc ggattgggag gagggccgac gccgtggccg gatagtctct ggagctgcct
 240
 tttgggggtg tttgcctgtt ggcattttca gtactccacg cgt
 283

<210> 3654
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 3654
 Met Pro Gln Ala Ser Pro Gly Ala Trp Arg His Trp Arg Lys Cys Ile
 1 5 10 15
 Ile Pro Ile Arg Ala Ser Phe Ala Ala Ala Glu Met Glu Arg Cys His
 20 25 30
 Gln Ala Val Phe Ser Thr Gly Asp Ala Pro Ser Ala Gln Gln Asp Ala
 35 40 45
 Ser Ser Glu Leu Arg Leu His Ile Phe Ala Asp Trp Glu Glu Gly Arg
 50 55 60
 Arg Arg Gly Arg Ile Val Ser Gly Ala Ala Phe Trp Gly Cys Leu Pro
 65 70 75 80
 Val Gly Ile Phe Ser Thr Pro Arg
 85

<210> 3655
 <211> 3477
 <212> DNA
 <213> Homo sapiens

<400> 3655
 nttttttttt tttttttttt tttttttttt tttttttttt ttttgactg attcagactt
 60
 taatggagggt gctcatttca atgccacaga ggtggtggca actgtggaac gtggcatggg
 120
 gagtgagagg ttgctctggt gcagctggag gaagaacagg gaacctaggg ttggggagag
 180
 atgtatagag gaaaactccc ccaggcacac agcctccgct ctggaccaac gcaggcttca
 240
 gtgagtacac acaaaggaac tgatgtcaag gccctttcta tgaccttcc cattctagca
 300
 agacctccca cccagtcac cttgggatct acagccacat gaaatacaga cacatcgttc
 360
 cccaagtca ggccagtttt aggccattga gttatgggga aatgattaat gggatgaatg
 420
 aaaaacaaat aaaataaata aataaataaa tacactaaag ccttattagc caggcgtgat
 480
 cacatgccca acactcccct ccacccagc actatgcaca gttcacggct catatgcaaa
 540
 gtggaagaca cgtgggacaa gagcaaagca caagtgcac atggtccctc tctaacacct
 600
 cagcacacca accctgacgc tcccatcaca gatgctgatc attcttcac ggacccccct
 660
 ttataataat cctcattcac atttctagtt tctgagggaa gagagaaaga gaaaggaaga
 720

agtggaaagt gcggaacccc aatgagtagg gcacagaaag gagggcgagc agagacagca
780
agaggtcagg taagccaagg agcagcggag caggtcaatc agggaagtcc tgggcacccct
840
gggggtcagg ggatctcagg ggggtgaacta tcacagatca ggacagcaag gttccaggag
900
gatgagacag aggttccacg tctccaggca agcagaggaa tcacagcaca ctgggattac
960
ggaacttgcg tccagcaaac ttagccttgc tgcccaagag cctcttcaat tctgaggagt
1020
tggttgatt tggccagacg ctccgagcgg cagggggcac cagtcttgat ctgtcctgtg
1080
cagagcccca ccacaaggtc agcaatgaat gtgtcctcag tctccccaga gcgggtggctc
1140
accatcaccc cccagccatt ctcttgggcc agcttgacag cctgaagaga ctcggtcacg
1200
gagccgatct ggttgacttt gagcaggagg cagttgcagg ccttctcgtt caccggcccg
1260
tcaatacgtt ttgggttggc cactgtgaga tcatccccca caatctggat tctacattg
1320
gctgtgaact tctgccaaagc tccccaatca tcttgggtcaa atgggtcctc aatggagacc
1380
actgggtagt ccctgacaaa gtcttggtag agtgcccca gctgggtccc agtgatgtac
1440
ctgctggggt cagtgggaga cttgaagtcc aagtcattat tgccatcacg ataaaactcg
1500
gaggcagcaa catccatgcc gatgacaacc tggtcagtgt agccggcctt tgcgattgca
1560
gtcttcacca gctccagtgc ttctttgttc tccaggatgt taggtgcgaa tccaccttca
1620
tcaccacat tgggtggcatc ctctccgtac ttctccttga tgacccctt gagtgtatgg
1680
tagacctctg cacctagtcg catggcttcc ttgaaggagc tggtccccc aggcagaatc
1740
atgaactcct gcatggccag cttgtttcca gcatgggagc ccccgttgat cacattgaag
1800
gctggcactg ggagtatgag gtcaggggtc ccagccaagt cagcgatgtg gcggtacagg
1860
gggacccct tctcaaaggc tgttgagcac atcaataaaa ctattgcgc tgccctgggt
1920
agcaagaaac tgaacgtcac agaacaagag aagattgaca aactgatgat cgagatggat
1980
ggaacagaaa ataaatctaa gtttgggtgc aacgccattc tgggggtgtc ccttgccgtc
2040
tgcaaagctg gtgccgttga gaagggggtc cccctgtacc gccacatcgc tgacttggt
2100
ggcaactctg aagtcactcct gccagtcccg gcgttcaatg tcatcaatgg cggttctcat
2160
gctggcaaca agctggccat gcaggagttc atgactctcc cagtcggtgc agcaaacttc
2220
agggaagcca tgcgcattgg agcagagggt taccacaacc tgaagaatgt catcaaggag
2280
aaatatggga aagatgccac caatgtgggg gatgaaggcg gggttgctcc caacatcctg
2340

gagaataaag aaggcctgga gctgctgaag actgctattg ggaaagctgg ctacactgat
 2400
 aagggtggta tcggcatgga cgtagcggcc tccgagttct tcaggctctgg gaagtatgac
 2460
 ctggacttca agtctcccga tgaccccagc aggtacatct cgccctgacca gctggctgac
 2520
 ctgtacaagt ccttcatcaa ggactaccca gtggtgtcta tcgaagatcc ctttgaccag
 2580
 gatgactggg gagcttggca gaagttcaca gccagtgcag gaatccaggt agtgggggat
 2640
 gatctcacag tgaccaaccc caagaggatc gccagggccg tgaacgagaa gtcctgcaac
 2700
 tgccctctgc tcaaagtcaa ccagattggc tccgtgaccg agtctcttca ggcgtgcaag
 2760
 ctggccccagg ccaatgggtg gggcgctcatg gtgtctcatc gttcggggga gactgaagat
 2820
 accttcatcg ctgacctggg tgtggggctg tgactgggc agatcaagac tggtgccct
 2880
 tgccgatctg agcgcttggc caagtacaac cagctcctca gaattgaaga ggagctgggc
 2940
 agcaaggcta agtttgccgg caggaacttc agaaaccctc tggccaagta agctgtgggc
 3000
 aggcaagccc ttcggtcacc tgttggtctac acagaccctc cccctcgtgt cagctcaggc
 3060
 agctcgaggc ccccgaccaa cacttgcagg ggtccctgct agttagcgcc ccaccgctg
 3120
 ggagttcgta ccgcttctt agaacttcta cagaagccaa gctccctgga gccctgttgg
 3180
 cagctctagc tttgcagtcg tgtaattggc ccaagtcatt gtttttctcg cctcactttc
 3240
 caccaagtgt cttaggtcat gtgagcctcg tgtcatctcc ggggtggcca caggctagat
 3300
 ccccggtggt tttgtgctca aaataaaaag cctcagtgc ccatgaaaa aaaaaaaaaa
 3360
 actcgtgccg actcgtgccg aattcggaga ncccatgtcc ggagacccca cggctggcac
 3420
 ttcgggcccc gtatgacctg ggacctcgcc gtcccgagac ctctggggtc cctccgt
 3477

<210> 3656

<211> 429

<212> PRT

<213> Homo sapiens

<400> 3656

Met	Ala	Ser	Leu	Lys	Glu	Leu	Ala	Pro	Thr	Gly	Arg	Ile	Met	Asn	Ser
1				5					10					15	
Cys	Met	Ala	Ser	Leu	Phe	Pro	Ala	Trp	Glu	Pro	Pro	Leu	Ile	Thr	Leu
			20					25					30		
Lys	Ala	Gly	Thr	Gly	Ser	Met	Arg	Ser	Gly	Phe	Pro	Ala	Lys	Ser	Ala
			35				40					45			
Met	Trp	Arg	Tyr	Arg	Gly	Thr	Pro	Phe	Ser	Lys	Ala	Val	Glu	His	Ile
		50				55					60				
Asn	Lys	Thr	Ile	Ala	Pro	Ala	Leu	Val	Ser	Lys	Lys	Leu	Asn	Val	Thr

```

65          70          75          80
Glu Gln Glu Lys Ile Asp Lys Leu Met Ile Glu Met Asp Gly Thr Glu
      85          90          95
Asn Lys Ser Lys Phe Gly Ala Asn Ala Ile Leu Gly Val Ser Leu Ala
      100        105        110
Val Cys Lys Ala Gly Ala Val Glu Lys Gly Val Pro Leu Tyr Arg His
      115        120        125
Ile Ala Asp Leu Ala Gly Asn Ser Glu Val Ile Leu Pro Val Pro Ala
      130        135        140
Phe Asn Val Ile Asn Gly Gly Ser His Ala Gly Asn Lys Leu Ala Met
      145        150        155        160
Gln Glu Phe Met Ile Leu Pro Val Gly Ala Ala Asn Phe Arg Glu Ala
      165        170        175
Met Arg Ile Gly Ala Glu Val Tyr His Asn Leu Lys Asn Val Ile Lys
      180        185        190
Glu Lys Tyr Gly Lys Asp Ala Thr Asn Val Gly Asp Glu Gly Gly Phe
      195        200        205
Ala Pro Asn Ile Leu Glu Asn Lys Glu Gly Leu Glu Leu Leu Lys Thr
      210        215        220
Ala Ile Gly Lys Ala Gly Tyr Thr Asp Lys Val Val Ile Gly Met Asp
      225        230        235        240
Val Ala Ala Ser Glu Phe Phe Arg Ser Gly Lys Tyr Asp Leu Asp Phe
      245        250        255
Lys Ser Pro Asp Asp Pro Ser Arg Tyr Ile Ser Pro Asp Gln Leu Ala
      260        265        270
Asp Leu Tyr Lys Ser Phe Ile Lys Asp Tyr Pro Val Val Ser Ile Glu
      275        280        285
Asp Pro Phe Asp Gln Asp Asp Trp Gly Ala Trp Gln Lys Phe Thr Ala
      290        295        300
Ser Ala Gly Ile Gln Val Val Gly Asp Asp Leu Thr Val Thr Asn Pro
      305        310        315        320
Lys Arg Ile Ala Gln Ala Val Asn Glu Lys Ser Cys Asn Cys Leu Leu
      325        330        335
Leu Lys Val Asn Gln Ile Gly Ser Val Thr Glu Ser Leu Gln Ala Cys
      340        345        350
Lys Leu Ala Gln Ala Asn Gly Trp Gly Val Met Val Ser His Arg Ser
      355        360        365
Gly Glu Thr Glu Asp Thr Phe Ile Ala Asp Leu Val Val Gly Leu Cys
      370        375        380
Thr Gly Gln Ile Lys Thr Gly Ala Pro Cys Arg Ser Glu Arg Leu Ala
      385        390        395        400
Lys Tyr Asn Gln Leu Leu Arg Ile Glu Glu Glu Leu Gly Ser Lys Ala
      405        410        415
Lys Phe Ala Gly Arg Asn Phe Arg Asn Pro Leu Ala Lys
      420        425

```

<210> 3657

<211> 337

<212> DNA

<213> Homo sapiens

<400> 3657

tggttacgtgt tcatttttcga ctcaaggcgt acacgtgcag atgtgtcaca tgttcatttt
60

cagctcaagg cgtacacgtg cagggtgtgtt acgtgttcat ttctgactca aggcgtacac
 120
 gtgcagatgt gtcacatggt cattttcggc tcaaggcgta cacgtgcagg tgtgttacgt
 180
 gttcattttc ggctcaaggc ttacacgtgc aggtgtgcca catgttcatt ttcggtcaa
 240
 ggcgtacatg tgcagggtgtg ttacatgttc attgtcagct caacgcgtac acgtgcagg
 300
 gtgccacatg ttcattttcg gttcaaggcg tacgcgt
 337

<210> 3658

<211> 99

<212> PRT

<213> Homo sapiens

<400> 3658

Met	Cys	His	Met	Phe	Ile	Phe	Ser	Ser	Arg	Arg	Thr	Arg	Ala	Gly	Val
1				5					10					15	
Leu	Arg	Val	His	Phe	Arg	Leu	Lys	Ala	Tyr	Thr	Cys	Arg	Cys	Val	Thr
			20					25					30		
Cys	Ser	Phe	Ser	Ala	Gln	Gly	Val	His	Val	Gln	Val	Cys	Tyr	Val	Phe
		35				40					45				
Ile	Phe	Gly	Ser	Arg	Leu	Thr	Arg	Ala	Gly	Val	Pro	His	Val	His	Phe
	50					55				60					
Arg	Leu	Lys	Ala	Tyr	Met	Cys	Arg	Cys	Val	Thr	Cys	Ser	Leu	Ser	Ala
65					70					75				80	
Gln	Arg	Val	His	Val	Gln	Val	Cys	His	Met	Phe	Ile	Phe	Gly	Ser	Arg
			85					90						95	

Arg Thr Arg

<210> 3659

<211> 1025

<212> DNA

<213> Homo sapiens

<400> 3659

naagctttta ctgctgatgg tgatcaagtt ttgcaggac gttattattc atctgaaaat
 60
 acaagaccta agttcctaag cagagatgtg gattctgaaa taagtgactt ggagaatgag
 120
 gttgaaaata agacggccca gatattaaat cttcagcaac atttatctgc ccttgaaaaa
 180
 gatattaaac acaatgagga acttcttaaa aggtgccaac tacattataa agaactaaag
 240
 atgaaaataa gaaaaaatat ttctgaaatt cgggaacttg agaacataga agaaccaccg
 300
 tctgtagata ttgcaacttt ggaagatgaa gctcaggaaa ataaaagcaa aatgaaaatg
 360
 gttgaggaac atatggagca acaaaaagaa aatatggagc atcttaaaag tctgaaaata
 420
 gaagcagaaa ataagtatga tgcaattaaa ttcaaaatta atcaactatc ggagctagca
 480

gaccactta aggatgaatt aaaccttgct gattctgaag tggataacca aaaacgagg
 540
 aaacgacatt atgaaaaaaaa acaaaaagaa cacttgata ccttaaataa aaagaaacga
 600
 gaactggata tgaagagaa agaactagag gagaaaatgt cacaagcaag acaaattctgc
 660
 ccagagcgta tagaagtaga aaaatctgca tcaattctgg acaagaaat taatcgatta
 720
 aggcagaaga tacaggcaga acatgctagt catggagatc gagaggaaat aatgaggcag
 780
 taccaagaag caagagagac ctatcttgat ctggatagta aagtgaggac tttaaaaaag
 840
 tttattaaat tactgggaga aatcatggag cacagattca agacatatca acaatttaga
 900
 aggtgtttga ctttacgatg caaattatac ttgacaact tactatctca gcgggcctat
 960
 tgtggaaaaa tgaattttga ccacaagaat gaaactctaa gtatatcagt tcagcctgga
 1020
 gaaaa
 1025

<210> 3660

<211> 341

<212> PRT

<213> Homo sapiens

<400> 3660

Xaa	Ala	Phe	Thr	Ala	Asp	Gly	Asp	Gln	Val	Phe	Ala	Gly	Arg	Tyr	Tyr
1				5					10					15	
Ser	Ser	Glu	Asn	Thr	Arg	Pro	Lys	Phe	Leu	Ser	Arg	Asp	Val	Asp	Ser
			20					25					30		
Glu	Ile	Ser	Asp	Leu	Glu	Asn	Glu	Val	Glu	Asn	Lys	Thr	Ala	Gln	Ile
		35				40					45				
Leu	Asn	Leu	Gln	Gln	His	Leu	Ser	Ala	Leu	Glu	Lys	Asp	Ile	Lys	His
	50					55					60				
Asn	Glu	Glu	Leu	Leu	Lys	Arg	Cys	Gln	Leu	His	Tyr	Lys	Glu	Leu	Lys
65					70				75					80	
Met	Lys	Ile	Arg	Lys	Asn	Ile	Ser	Glu	Ile	Arg	Glu	Leu	Glu	Asn	Ile
				85					90					95	
Glu	Glu	His	Gln	Ser	Val	Asp	Ile	Ala	Thr	Leu	Glu	Asp	Glu	Ala	Gln
			100					105					110		
Glu	Asn	Lys	Ser	Lys	Met	Lys	Met	Val	Glu	Glu	His	Met	Glu	Gln	Gln
	115					120					125				
Lys	Glu	Asn	Met	Glu	His	Leu	Lys	Ser	Leu	Lys	Ile	Glu	Ala	Glu	Asn
	130					135					140				
Lys	Tyr	Asp	Ala	Ile	Lys	Phe	Lys	Ile	Asn	Gln	Leu	Ser	Glu	Leu	Ala
145					150				155					160	
Asp	Pro	Leu	Lys	Asp	Glu	Leu	Asn	Leu	Ala	Asp	Ser	Glu	Val	Asp	Asn
			165					170						175	
Gln	Lys	Arg	Gly	Lys	Arg	His	Tyr	Glu	Lys	Lys	Gln	Lys	Glu	His	Leu
		180						185					190		
Asp	Thr	Leu	Asn	Lys	Lys	Lys	Arg	Glu	Leu	Asp	Met	Lys	Glu	Lys	Glu
	195						200					205			
Leu	Glu	Glu	Lys	Met	Ser	Gln	Ala	Arg	Gln	Ile	Cys	Pro	Glu	Arg	Ile

210	215	220
Glu Val Glu Lys Ser Ala Ser Ile Leu Asp Lys Glu Ile Asn Arg Leu		
225	230	235
Arg Gln Lys Ile Gln Ala Glu His Ala Ser His Gly Asp Arg Glu Glu		240
	245	250
Ile Met Arg Gln Tyr Gln Glu Ala Arg Glu Thr Tyr Leu Asp Leu Asp		255
	260	265
Ser Lys Val Arg Thr Leu Lys Lys Phe Ile Lys Leu Leu Gly Glu Ile		270
	275	280
Met Glu His Arg Phe Lys Thr Tyr Gln Gln Phe Arg Arg Cys Leu Thr		285
	290	295
Leu Arg Cys Lys Leu Tyr Phe Asp Asn Leu Leu Ser Gln Arg Ala Tyr		300
305	310	315
Cys Gly Lys Met Asn Phe Asp His Lys Asn Glu Thr Leu Ser Ile Ser		320
	325	330
Val Gln Pro Gly Glu		335
	340	

<210> 3661

<211> 1117

<212> DNA

<213> Homo sapiens

<400> 3661

gtgcactcgg attggcaaag cccgagtggg ctgtctccac tgggttcttg gtcattcccc
60
tgtggcaaaa gtcctcctg catctgatac ttgggtcttc tccctctttt ataaaaaat
120
ttagatccta gaatgtgcct ttccacaatg gcttcgtttc caattttcac tgttatttgg
180
caaaggggtg caacattact atttgtggag gttcccgga gagcagggtt tgcaatgtag
240
gtttcaattt tgctgggttc ttcagcaata tttgtggtt tgctcagtga tctccagga
300
tcagcaacat agtttgactc ctccgggtatt tctcccttg tatgtgatgt agttttctt
360
ttctccttaa tgcttttggg tctgcttgca aacctacca ctttatctgg ctgggctta
420
ctgtcatctt tcagggactg actgacagct ggggtctgaaa aggtctcttg gttgctgctg
480
gtcatggcag caatggcatt gctgtgcatg atcaccgatg aaaactggct gctgtgtaca
540
atgaccgagg gtgcagagcc actgtagctg atcacagagg cggcattctc actgctatta
600
ctcaaagata aaacaggtag atccctgccc cggagggtcag aactgacagc attttcagtg
660
gaagaaactg acacctcagt tgaataaaaag ttattgtcaa gatccatttt caatgcctcc
720
tctccccatt tggtagcctc tgcattttgt acattggcag aagtgggtat gtctgacat
780
gcagatgttt ccaatgggat ggctggactg ttgggtcaggg tgtttacagt atcttggaaa
840
ttcagcgttg gtaattcaga gctgtgtgga ttctgaacaa cataggtacc aggtgcagac
900

tcattcattt gactgttttc tcgtgcattt tcataggaag aatttcggta gctcttataa
 960
 ggggctctct tgcatttcat aggcagtagc ctataaagtt tatacggata gacactaggc
 1020
 ttcaagcctc catttgctgt ttttttactg atggaaagtc tatgatcgat ggcattggaaa
 1080
 gacttctgat gatttttgag tatatagtag gtcatga
 1117

<210> 3662

<211> 371

<212> PRT

<213> Homo sapiens

<400> 3662

Met	Thr	Tyr	Tyr	Ile	Leu	Lys	Asn	His	Gln	Lys	Ser	Phe	His	Ala	Ile
1				5					10					15	
Asp	His	Arg	Leu	Ser	Ile	Ser	Lys	Lys	Thr	Ala	Asn	Gly	Gly	Leu	Lys
			20					25					30		
Pro	Ser	Val	Tyr	Pro	Tyr	Lys	Leu	Tyr	Arg	Leu	Leu	Pro	Met	Lys	Cys
			35				40					45			
Lys	Arg	Ala	Pro	Tyr	Lys	Ser	Tyr	Arg	Asn	Ser	Ser	Tyr	Glu	Asn	Ala
	50					55					60				
Arg	Glu	Asn	Ser	Gln	Met	Asn	Glu	Ser	Ala	Pro	Gly	Thr	Tyr	Val	Val
65					70				75					80	
Gln	Asn	Pro	His	Ser	Ser	Glu	Leu	Pro	Thr	Leu	Asn	Phe	Gln	Asp	Thr
			85						90				95		
Val	Asn	Thr	Leu	Thr	Asn	Ser	Pro	Ala	Ile	Pro	Leu	Glu	Thr	Ser	Ala
			100					105					110		
Cys	Gln	Asp	Ile	Pro	Thr	Ser	Ala	Asn	Val	Gln	Asn	Ala	Glu	Gly	Thr
			115				120					125			
Lys	Trp	Gly	Glu	Glu	Ala	Leu	Lys	Met	Asp	Leu	Asp	Asn	Asn	Phe	Tyr
	130					135					140				
Ser	Thr	Glu	Val	Ser	Val	Ser	Ser	Thr	Glu	Asn	Ala	Val	Ser	Ser	Asp
145					150				155						160
Leu	Arg	Ala	Gly	Asp	Val	Pro	Val	Leu	Ser	Leu	Ser	Asn	Ser	Ser	Glu
			165					170					175		
Asn	Ala	Ala	Ser	Val	Ile	Ser	Tyr	Ser	Gly	Ser	Ala	Pro	Ser	Val	Ile
			180					185					190		
Val	His	Ser	Ser	Gln	Phe	Ser	Ser	Val	Ile	Met	His	Ser	Asn	Ala	Ile
			195				200					205			
Ala	Ala	Met	Thr	Ser	Ser	Asn	His	Arg	Ala	Phe	Ser	Asp	Pro	Ala	Val
			210			215					220				
Ser	Gln	Ser	Leu	Lys	Asp	Asp	Ser	Lys	Pro	Glu	Pro	Asp	Lys	Val	Gly
225				230						235				240	
Arg	Phe	Ala	Ser	Arg	Pro	Lys	Ser	Ile	Lys	Glu	Lys	Lys	Lys	Thr	Thr
			245					250					255		
Ser	His	Thr	Arg	Gly	Glu	Ile	Pro	Glu	Glu	Ser	Asn	Tyr	Val	Ala	Asp
			260				265						270		
Pro	Gly	Gly	Ser	Leu	Ser	Lys	Thr	Thr	Asn	Ile	Ala	Glu	Glu	Thr	Ser
			275				280					285			
Lys	Ile	Glu	Thr	Tyr	Ile	Ala	Lys	Pro	Ala	Leu	Pro	Gly	Thr	Ser	Thr
	290					295				300					
Asn	Ser	Asn	Val	Ala	Pro	Leu	Cys	Gln	Ile	Thr	Val	Lys	Ile	Gly	Asn

```

305          310          315          320
Glu Ala Ile Val Lys Arg His Ile Leu Gly Ser Lys Leu Phe Tyr Lys
          325          330          335
Arg Gly Arg Arg Pro Lys Tyr Gln Met Gln Glu Glu Leu Leu Pro Gln
          340          345          350
Gly Asn Asp Pro Glu Pro Ser Gly Asp Ser Pro Leu Gly Leu Cys Gln
          355          360          365
Ser Glu Cys
          370

```

<210> 3663

<211> 481

<212> DNA

<213> Homo sapiens

<400> 3663

```

gatcctgata cgttgctgga atggctgcag atgggacagg gagatgaaag ggacatgcag
60
ctaatagccc tggagcagct atgcatgctg cttttgatgt ctgacaatgt ggatcgctgt
120
tttgaaacat gtccctcctcg cactttctta ccagcccttt aaaaaatttt tcttgatgaa
180
agtgtccag acaatgtatt agaggtgaca gcccgtgcca taacatacta cctggatgta
240
tctgcggaat gtaccggaag gattgttggg gtagatggag ctataaaagc acttttgaat
300
cgtttggtgg tagttgaact taacaacagg actagcagag acttagctga acagtgtgta
360
aaggtaagta ttacttattg gctcattact tatttttctc agacctctca gggatgagta
420
ttggctcatt taaacatcac ttagagactg aaaaatgtat ttactaaaaa aaaagtcgac
480
g
481

```

<210> 3664

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3664

```

Asp Pro Asp Thr Leu Leu Glu Trp Leu Gln Met Gly Gln Gly Asp Glu
1          5          10          15
Arg Asp Met Gln Leu Ile Ala Leu Glu Gln Leu Cys Met Leu Leu Leu
          20          25          30
Met Ser Asp Asn Val Asp Arg Cys Phe Glu Thr Cys Pro Pro Arg Thr
          35          40          45
Phe Leu Pro Ala Leu Tyr Lys Ile Phe Leu Asp Glu Ser Ala Pro Asp
          50          55          60
Asn Val Leu Glu Val Thr Ala Arg Ala Ile Thr Tyr Tyr Leu Asp Val
65          70          75          80
Ser Ala Glu Cys Thr Arg Arg Ile Val Gly Val Asp Gly Ala Ile Lys
          85          90          95
Ala Leu Cys Asn Arg Leu Val Val Val Glu Leu Asn Asn Arg Thr Ser

```

	100		105		110										
Arg	Asp	Leu	Ala	Glu	Gln	Cys	Val	Lys	Val	Ser	Ile	Thr	Tyr	Trp	Leu
	115				120							125			
Ile	Thr	Tyr	Phe	Ser	Gln	Thr	Ser	Gln	Gly						
	130				135										

<210> 3665

<211> 6633

<212> DNA

<213> Homo sapiens

<400> 3665

```

aggggcgccgctgacgggactggccgagccggcggtgagagggcggcgcgtcgggagcggg
60
ccgcgcgggcaaatgtcgcccaaggtgcggctcaagaagctggagcagctgctcctggac
120
gggccctggcgcaacgagagcgccctgagcgtggaacgcgtctcgacgtgctcgtctgc
180
ctgtacaccgagtcagccactcgcccgacagtagctggccgagttcctc
240
gagtgggctaaccatttacacagctggtagaagaaatgcagcttcacagaaagacttt
300
gaaataattaagtaattggaagaggtgctttggtaggttgctgttgtcaaatgaag
360
aatactgaacgaatttatgcataaaaaatctcaacaagctggagatgctgaaagagca
420
gagaccgcgtgcttcagagaggagcgcgatgtgctggtagacggcgactgccagtggac
480
accgcgctgcactacgccttcaggacgagaaccacctgacttagtcatggattactat
540
gtgggtggtagtttactgacctgctcagcaatttgaagacaagcttccggaagatatg
600
gcgaggttctacattggtagaatggtagctgccattgactccatccatcagcttcattac
660
gtgcacagagacattaaaccagacaatgtcttttggacgtgaatggtagtatccgcctg
720
gctgactttgatcatgtttgaagatgaatgatgatggcactgtgcagctcctcgtaggc
780
gtgggcacacctgactacatctcgccggagatcctgcaggcgatggaggacggcatgggc
840
aaatacgggcctgagtgtagctggtgtctctgggtgtctgcatgtatgatgctctat
900
ggagaaacgcggttttatgcggagtcactcgtggagacctatgggaagatcatgaacct
960
gaagagcgatccagttcccattccatgtcacggatgtatctgaagaagcgaaggacctc
1020
atccagagactgatctgcagtagagaacgcggctggggcagaatggaatagaggatttc
1080
aaaaagcatgcgttttttgaaggtctaaattgggaaaataacgaaacctagaagcacct
1140
tatattcctgatgtgagcagtcctctgacacatccaactcgacgtggaagcagcgtg
1200
ctgagaaacacggaatatattacctctggtctcacacagcttttctgattacatttg
1260

```

ccattcattg gttttacatt cacaacggaa agctgttttt ctgatcgagg ctctctgaag
1320
agcataatgc agtccaacac attaaccaaa gatgaggatg tgcagcggga cctggagcac
1380
agcctgcaga tggaagctta cgagaggagg attcggaggc tggaacagga gaagctggag
1440
ctgagcagga agctgcaaga gtccaccag accgtgcagt cctccacgg ctcatctcgg
1500
gccctcagca attcaaaccg agataaagaa atcaaaaagc taaatgaaga aatcgaacgc
1560
ttgaagaata aaatagcaga ttcaaacagg ctggagcgac agcttgagga cacagtggcg
1620
cttcgccaaag agcgtgagga ctccacgcag cggctgcggg ggctggagaa gcagcacgc
1680
gtgggtccggc aggagaagga ggagctgcac aagcaactgg ttgaagcctc agagcgggtg
1740
aaatcccagg ccaaggaact caaagatgcc catcagcagc gaaagctggc cctgcaggag
1800
ttctcggagc tgaacgagcg catggcagag ctccgtgccc agaagcagaa ggtgtcccgg
1860
cagctgcgag acaaggagga ggagatggag gtggccacgc agaaggtgga cgccatgcgg
1920
caggaaatgc ggagagctga gaagctcagg aaagagctgg aagctcagct tgatgatgct
1980
gttgctgagg cctccaagga gcgcaagctt cgtgagcaca gcgagaactt ctgcaagcaa
2040
atggaaaagcg agctggaggc cctcaagggtg aagcaaggag gccggggagc ggggtgccacc
2100
ttagagcacc agcaagagat ttccaaaatc aaatccgagc tggagaagaa agtcttattt
2160
tatgaagagg aattggtcag acgtgaggcc tcccatgtgc tagaagtga aaatgtgaag
2220
aaggaggtgc atgattcaga aagccaccag ctggccctgc agaaagaaat cttgatgtta
2280
aaagataagt tagaaaagtc aaagcgagaa cggcataacg agatggagga ggcagtaggt
2340
acaataaaag ataaatacga acgagaaaga gcgatgctgt ttgatgaaaa caagaagcta
2400
actgctgaaa atgaaaagct ctgttccttt gtggataaac tcacagctca aaatagacag
2460
ctggaggatg agctgcagga tctggcagcc aagaaggagt cagtggccca ctgggaagct
2520
cagattgcgg aaatcattca gtgggtcagt gacgagaaag atgcccgggg ttacctcaa
2580
gctcttgctt ccaagatgac cgaagagctc gaggtttga ggagtctag tctggggtca
2640
agaacactgg acccgctgtg gaagggtgcg cgcagccaga agctggacat gtccgcgcgg
2700
ctggagctgc agtcggccct ggaggcggag atccgggcca agcagcttgt ccaggaggag
2760
ctcaggaagg tcaaggacgc caacctcacc ttggaaagca aactaaagga ttccgaagcc
2820
aaaaacagag aattattaga agaaatggaa attttgaaga aaaagatgga agaaaaattc
2880

agagcagata ctgggctcaa acttccagat tttcaggatt ccatttttga gtattttcaac
2940
actgctcttc ttgcacatga cctgacattt agagactctc tctcctcctc gtctgcatct
3000
tccttgctag ccttttggga agaaaccagc tcagctagtg agcaagaaac acaagctccg
3060
aagccagaag cgtecccgtc gatgtctgtg gctgcatcag agcagcagga ggacatggct
3120
cggcccccgc agaggccatc cgctgtgccg ttgccacca cgcaggccct ggctctggct
3180
ggaccgaagc caaaagctca ccagttcagc atcaagtcct tctccagccc tactcagtgc
3240
agccactgca cctccctgat ggttgggctg atccggcagg gctacgcctg cgagggtgtg
3300
tcctttgctt gccacgtgtc ctgcaaagac ggtgcccccc aggtgtgccc aatacctccc
3360
gagcagtcca agaggcctct gggcggtggac gtgcagcgag gcatcggaac agcctacaaa
3420
ggccatgtca aggtcccaaa gccacgggg gtgaagaagg gatggcagcg cgcatatgca
3480
gtcgtctgtg actgcaagct ctctctgtat gatctgcctg aaggaaaac caccagcct
3540
ggtgtcattg cgagccaagt cttggatctc agagatgacg agttttccgt gagctcagtc
3600
ctggcctcag atgtcattca tgctacacgc cgagatattc catgtatatt cagggtgacg
3660
gcctctctct taggtgcacc ttctaagacc agctcgctgc tcattctgac agaaaatgag
3720
aatgaaaaga ggaagtgggt tgggattcta gaaggactcc agtccatcct tcataaaaa
3780
cggctgagga atcaggctcg gcatgttccc ttggaagcct acgacagctc gctgcctctc
3840
atcaaggcca tcctgacagc tgccatcgtg gatgcagaca ggattgcagt cggcctagaa
3900
gaagggtctt atgtcataga ggtcaccoga gatgtgatcg tccgtgccgc tgactgtaag
3960
aagggtacac agatcgagct tgctcccagg gagaagatcg taatcctcct ctgtggccgg
4020
aaccaccatg tgcacctcta tccgtggtcg tcccttgatg gagcggaagg cagctttgac
4080
atcaagcttc cggaaaccaa aggctgccag ctcatggcca cggccacact caagaggaac
4140
tctggcacct gcctgtttgt ggccgtgaaa cggtgatcc tttgctatga gatccagaga
4200
acgaagccat tccacagaaa gttcaatgag attgtggctc ccggcagcgt gcagtgcctg
4260
gcggtgctca gggacaggct ctgtgtgggc tacccttctg ggttctgcct gctgagcatc
4320
cagggggacg ggcagcctct aaacctggta aatcccaatg acccctcgt tgcgttctc
4380
tcacaacagt cttttgatgc cttttgtgct gtggagctcg aaagcgagga gtacctgctt
4440
tgcttcagcc acatgggact gtacgtggac ccgcaaggcc ggagggcacg cgcgcaggag
4500

ctcatgtggc ctgcggetcc tgtcgectgt agttgcagcc ccaccacgt cacggtgtac
4560
agcgagtatg gcgtggacgt ctttgatgtg cgcaccatgg agtgggtgca gaccatcggc
4620
ctgcggagga taaggccctt gaactctgaa ggcacctca acctcctcaa ctgcgagcct
4680
ccacgcttga tctacttcaa gagcaagttc tcgggagcgg ttctcaacgt gccggacacc
4740
tccgacaaca gcaagaagca gatgctgcgc accaggagca aaaggcgggt cgtcttcaag
4800
gtcccgagag aagagagact gcagcagagg cgagagatgc ttagagaccc agaattgaga
4860
tccaaaatga tatccaaccc aaccaacttc aaccacgtgg cccacatggg ccaggcgac
4920
ggcatgcagg tgctcatgga cctgcctctg agtgcctgctg cccctccca ggaggaaagg
4980
ccgggccccg ctcccaccaa cctggctcgc cagcctccat ccaggaacaa gccctacatc
5040
tcgtggccct catcaggtgg atcggagcct agcgtgactg tgcctctgag aagtatgtct
5100
gatccagacc aggactttga caaagagcct gattcggact ccaccaacaa ctcaactcca
5160
tcgaatagct ccaaccccag cgcccaccg agccccaact ccccccacag gagccagctc
5220
cccctcgaag gcctggagca gccggcctgt gacacctgaa gccgccagct cgccacaggg
5280
gccaggggagc tggagatggc ctccagcgtc agtgccaaga ctgagcgggc cctccagtgt
5340
tgtccaagga aatgtagaat cactttttag atatggagat gaagaagaca aatctttatt
5400
ataatattga tcagttttat gccgcattgt tcgtggcagt agaccacatc tgttcgtctg
5460
cacagctgtg aggcgatgct gttccatctg cacatgaagg acccccatac agcctgtctc
5520
ccacctga caaccgaga gggcatatgg ggccctgcca acaccacttc ctgagcagaa
5580
accgcgtatg acgcggctgc ttcggaagca gacatctggg gacacagcct cagtaccag
5640
tcttttcct agttcctgaa actttcctag gaccttaaga gaatagtagg aggtcctata
5700
gcattcccag tgtcactaga attttgaaga caggaaagtg gaggttagtc tgtggcctt
5760
ttttcattta gccattgcac agtcagctgc agaagtctg ctgaccacct agtcattggac
5820
aaaggcccag gaccagtgc accctgcgtc cctgtgtgca ttaagtccat tctgggtcgc
5880
agccatgaag tgtcaccagt atctactact gtgaagtcag ctgtgctgtt ttccattcgc
5940
ttccactgct tctgcctcct gccataaaac cagcgagtgt cgtgggtgcag gcaggccctg
6000
tggcctgctg ggctgaggga agtcagagcc ccagggcgcc acgaagcagc cactgggata
6060
ccccacccg cccgcctctg cccgcccccc ccccaccagt cctgccccg catggagccc
6120

ccgtgattag tagcccgat gatcacgtag acccaccacaa cacactcctg cacactggcc
 6180
 ccggcccacg gcacagcaat ccctgcgcg tggatttcac ctcacccttt gtaccagatg
 6240
 ttgagtgaac agctctgtgg ccctgtgtcg tcagaggctt gtgattaact gtggcggcag
 6300
 acacagcttg tccacagctt gggccaggct tccctgtcc tcccacgggt cggctgcttg
 6360
 gcaaggctgt tcaggacgtg cacttcccca agtcggcact gagtggccca gcaccaccta
 6420
 gccctgccac cccactgccc tcttgggcct tctgtggat gggcacctgg ggggttctgg
 6480
 tttttacttt tttaatgtaa gtctcagtct ttgtaattaa ttattgaatt gtgagaacat
 6540
 ttttgaacaa tttacctgtc aataaagcag aagacggcag ttttaaagtt aaaaaaaaaa
 6600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 6633

<210> 3666

<211> 1728

<212> PRT

<213> Homo sapiens

<400> 3666

Met	Ser	Ala	Lys	Val	Arg	Leu	Lys	Lys	Leu	Glu	Gln	Leu	Leu	Leu	Asp
1				5					10					15	
Gly	Pro	Trp	Arg	Asn	Glu	Ser	Ala	Leu	Ser	Val	Glu	Thr	Leu	Leu	Asp
			20					25					30		
Val	Leu	Val	Cys	Leu	Tyr	Thr	Glu	Cys	Ser	His	Ser	Ala	Leu	Arg	Arg
			35				40					45			
Asp	Lys	Tyr	Val	Ala	Glu	Phe	Leu	Glu	Trp	Ala	Lys	Pro	Phe	Thr	Gln
	50					55					60				
Leu	Val	Lys	Glu	Met	Gln	Leu	His	Arg	Glu	Asp	Phe	Glu	Ile	Ile	Lys
65					70				75					80	
Val	Ile	Gly	Arg	Gly	Ala	Phe	Gly	Glu	Val	Ala	Val	Val	Lys	Met	Lys
			85					90					95		
Asn	Thr	Glu	Arg	Ile	Tyr	Ala	Met	Lys	Ile	Leu	Asn	Lys	Trp	Glu	Met
			100					105					110		
Leu	Lys	Arg	Ala	Glu	Thr	Ala	Cys	Phe	Arg	Glu	Glu	Arg	Asp	Val	Leu
			115				120					125			
Val	Asn	Gly	Asp	Cys	Gln	Trp	Ile	Thr	Ala	Leu	His	Tyr	Ala	Phe	Gln
			130				135					140			
Asp	Glu	Asn	His	Leu	Tyr	Leu	Val	Met	Asp	Tyr	Tyr	Val	Gly	Gly	Asp
145					150				155					160	
Leu	Leu	Thr	Leu	Leu	Ser	Lys	Phe	Glu	Asp	Lys	Leu	Pro	Glu	Asp	Met
			165					170					175		
Ala	Arg	Phe	Tyr	Ile	Gly	Glu	Met	Val	Leu	Ala	Ile	Asp	Ser	Ile	His
			180					185				190			
Gln	Leu	His	Tyr	Val	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Val	Leu	Leu
			195				200					205			
Asp	Val	Asn	Gly	His	Ile	Arg	Leu	Ala	Asp	Phe	Gly	Ser	Cys	Leu	Lys
			210				215				220				
Met	Asn	Asp	Asp	Gly	Thr	Val	Gln	Ser	Ser	Val	Ala	Val	Gly	Thr	Pro

225					230					235				240
Asp	Tyr	Ile	Ser	Pro	Glu	Ile	Leu	Gln	Ala	Met	Glu	Asp	Gly	Met Gly
				245					250				255	
Lys	Tyr	Gly	Pro	Glu	Cys	Asp	Trp	Trp	Ser	Leu	Gly	Val	Cys	Met Tyr
			260					265					270	
Glu	Met	Leu	Tyr	Gly	Glu	Thr	Pro	Phe	Tyr	Ala	Glu	Ser	Leu	Val Glu
		275				280						285		
Thr	Tyr	Gly	Lys	Ile	Met	Asn	His	Glu	Glu	Arg	Phe	Gln	Phe	Pro Ser
	290				295						300			
His	Val	Thr	Asp	Val	Ser	Glu	Glu	Ala	Lys	Asp	Leu	Ile	Gln	Arg Leu
	305				310					315				320
Ile	Cys	Ser	Arg	Glu	Arg	Arg	Leu	Gly	Gln	Asn	Gly	Ile	Glu	Asp Phe
			325					330						335
Lys	Lys	His	Ala	Phe	Phe	Glu	Gly	Leu	Asn	Trp	Glu	Asn	Ile	Arg Asn
			340					345					350	
Leu	Glu	Ala	Pro	Tyr	Ile	Pro	Asp	Val	Ser	Ser	Pro	Ser	Asp	Thr Ser
	355						360					365		
Asn	Phe	Asp	Val	Asp	Asp	Asp	Val	Leu	Arg	Asn	Thr	Glu	Ile	Leu Pro
	370				375						380			
Pro	Gly	Ser	His	Thr	Gly	Phe	Ser	Gly	Leu	His	Leu	Pro	Phe	Ile Gly
	385				390					395				400
Phe	Thr	Phe	Thr	Thr	Glu	Ser	Cys	Phe	Ser	Asp	Arg	Gly	Ser	Leu Lys
			405					410						415
Ser	Ile	Met	Gln	Ser	Asn	Thr	Leu	Thr	Lys	Asp	Glu	Asp	Val	Gln Arg
			420					425					430	
Asp	Leu	Glu	His	Ser	Leu	Gln	Met	Glu	Ala	Tyr	Glu	Arg	Arg	Ile Arg
	435					440					445			
Arg	Leu	Glu	Gln	Glu	Lys	Leu	Glu	Leu	Ser	Arg	Lys	Leu	Gln	Glu Ser
	450				455						460			
Thr	Gln	Thr	Val	Gln	Ser	Leu	His	Gly	Ser	Ser	Arg	Ala	Leu	Ser Asn
	465				470				475					480
Ser	Asn	Arg	Asp	Lys	Glu	Ile	Lys	Lys	Leu	Asn	Glu	Glu	Ile	Glu Arg
			485					490						495
Leu	Lys	Asn	Lys	Ile	Ala	Asp	Ser	Asn	Arg	Leu	Glu	Arg	Gln	Leu Glu
		500						505					510	
Asp	Thr	Val	Ala	Leu	Arg	Gln	Glu	Arg	Glu	Asp	Ser	Thr	Gln	Arg Leu
	515					520						525		
Arg	Gly	Leu	Glu	Lys	Gln	His	Arg	Val	Val	Arg	Gln	Glu	Lys	Glu Glu
	530				535						540			
Leu	His	Lys	Gln	Leu	Val	Glu	Ala	Ser	Glu	Arg	Leu	Lys	Ser	Gln Ala
	545				550				555					560
Lys	Glu	Leu	Lys	Asp	Ala	His	Gln	Gln	Arg	Lys	Leu	Ala	Leu	Gln Glu
			565					570						575
Phe	Ser	Glu	Leu	Asn	Glu	Arg	Met	Ala	Glu	Leu	Arg	Ala	Gln	Lys Gln
			580					585					590	
Lys	Val	Ser	Arg	Gln	Leu	Arg	Asp	Lys	Glu	Glu	Glu	Met	Glu	Val Ala
	595						600					605		
Thr	Gln	Lys	Val	Asp	Ala	Met	Arg	Gln	Glu	Met	Arg	Arg	Ala	Glu Lys
	610				615						620			
Leu	Arg	Lys	Glu	Leu	Glu	Ala	Gln	Leu	Asp	Asp	Ala	Val	Ala	Glu Ala
	625				630				635					640
Ser	Lys	Glu	Arg	Lys	Leu	Arg	Glu	His	Ser	Glu	Asn	Phe	Cys	Lys Gln
			645					650					655	
Met	Glu	Ser	Glu	Leu	Glu	Ala	Leu	Lys	Val	Lys	Gln	Gly	Gly	Arg Gly


```

1090      1095      1100
Val Asp Val Gln Arg Gly Ile Gly Thr Ala Tyr Lys Gly His Val Lys
1105      1110      1115      1120
Val Pro Lys Pro Thr Gly Val Lys Lys Gly Trp Gln Arg Ala Tyr Ala
      1125      1130      1135
Val Val Cys Asp Cys Lys Leu Phe Leu Tyr Asp Leu Pro Glu Gly Lys
      1140      1145      1150
Ser Thr Gln Pro Gly Val Ile Ala Ser Gln Val Leu Asp Leu Arg Asp
      1155      1160      1165
Asp Glu Phe Ser Val Ser Ser Val Leu Ala Ser Asp Val Ile His Ala
      1170      1175      1180
Thr Arg Arg Asp Ile Pro Cys Ile Phe Arg Val Thr Ala Ser Leu Leu
1185      1190      1195      1200
Gly Ala Pro Ser Lys Thr Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu
      1205      1210      1215
Asn Glu Lys Arg Lys Trp Val Gly Ile Leu Glu Gly Leu Gln Ser Ile
      1220      1225      1230
Leu His Lys Asn Arg Leu Arg Asn Gln Val Val His Val Pro Leu Glu
      1235      1240      1245
Ala Tyr Asp Ser Ser Leu Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala
      1250      1255      1260
Ile Val Asp Ala Asp Arg Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr
1265      1270      1275      1280
Val Ile Glu Val Thr Arg Asp Val Ile Val Arg Ala Ala Asp Cys Lys
      1285      1290      1295
Lys Val His Gln Ile Glu Leu Ala Pro Arg Glu Lys Ile Val Ile Leu
      1300      1305      1310
Leu Cys Gly Arg Asn His His Val His Leu Tyr Pro Trp Ser Ser Leu
      1315      1320      1325
Asp Gly Ala Glu Gly Ser Phe Asp Ile Lys Leu Pro Glu Thr Lys Gly
      1330      1335      1340
Cys Gln Leu Met Ala Thr Ala Thr Leu Lys Arg Asn Ser Gly Thr Cys
1345      1350      1355      1360
Leu Phe Val Ala Val Lys Arg Leu Ile Leu Cys Tyr Glu Ile Gln Arg
      1365      1370      1375
Thr Lys Pro Phe His Arg Lys Phe Asn Glu Ile Val Ala Pro Gly Ser
      1380      1385      1390
Val Gln Cys Leu Ala Val Leu Arg Asp Arg Leu Cys Val Gly Tyr Pro
      1395      1400      1405
Ser Gly Phe Cys Leu Leu Ser Ile Gln Gly Asp Gly Gln Pro Leu Asn
      1410      1415      1420
Leu Val Asn Pro Asn Asp Pro Ser Leu Ala Phe Leu Ser Gln Gln Ser
1425      1430      1435      1440
Phe Asp Ala Leu Cys Ala Val Glu Leu Glu Ser Glu Glu Tyr Leu Leu
      1445      1450      1455
Cys Phe Ser His Met Gly Leu Tyr Val Asp Pro Gln Gly Arg Arg Ala
      1460      1465      1470
Arg Ala Gln Glu Leu Met Trp Pro Ala Ala Pro Val Ala Cys Ser Cys
      1475      1480      1485
Ser Pro Thr His Val Thr Val Tyr Ser Glu Tyr Gly Val Asp Val Phe
      1490      1495      1500
Asp Val Arg Thr Met Glu Trp Val Gln Thr Ile Gly Leu Arg Arg Ile
1505      1510      1515      1520
Arg Pro Leu Asn Ser Glu Gly Thr Leu Asn Leu Leu Asn Cys Glu Pro

```

	1525		1530		1535
Pro Arg Leu Ile Tyr Phe Lys Ser Lys Phe Ser Gly Ala Val Leu Asn					
	1540		1545		1550
Val Pro Asp Thr Ser Asp Asn Ser Lys Lys Gln Met Leu Arg Thr Arg					
	1555		1560		1565
Ser Lys Arg Arg Phe Val Phe Lys Val Pro Glu Glu Glu Arg Leu Gln					
	1570		1575		1580
Gln Arg Arg Glu Met Leu Arg Asp Pro Glu Leu Arg Ser Lys Met Ile					
1585		1590		1595	1600
Ser Asn Pro Thr Asn Phe Asn His Val Ala His Met Gly Pro Gly Asp					
	1605		1610		1615
Gly Met Gln Val Leu Met Asp Leu Pro Leu Ser Ala Val Pro Pro Ser					
	1620		1625		1630
Gln Glu Glu Arg Pro Gly Pro Ala Pro Thr Asn Leu Ala Arg Gln Pro					
	1635		1640		1645
Pro Ser Arg Asn Lys Pro Tyr Ile Ser Trp Pro Ser Ser Gly Gly Ser					
	1650		1655		1660
Glu Pro Ser Val Thr Val Pro Leu Arg Ser Met Ser Asp Pro Asp Gln					
1665		1670		1675	1680
Asp Phe Asp Lys Glu Pro Asp Ser Asp Ser Thr Lys His Ser Thr Pro					
	1685		1690		1695
Ser Asn Ser Ser Asn Pro Ser Gly Pro Pro Ser Pro Asn Ser Pro His					
	1700		1705		1710
Arg Ser Gln Leu Pro Leu Glu Gly Leu Glu Gln Pro Ala Cys Asp Thr					
	1715		1720		1725

<210> 3667

<211> 505

<212> DNA

<213> Homo sapiens

<400> 3667

tgtacattaa tctaaatacc tggatttaca ttgatatttt aatatttgta aatttcattgt
 60
 taattcccta tgtaacaag tttaataagt catctgtaac agtacaatta agtccatata
 120
 tgattgtatt tactctttct tccctactca tagtatgcgt tccattttga ggaatcacag
 180
 atatcgaaga gatgccagaa cactagaaga tgaagaagag atgtgggtta acacagatga
 240
 agatgacatg gaagatggag aagctgtagt gtctccatct gacaaaacta aaaatgatga
 300
 tgatattatg gatccaataa gtaaattcat ggaaaggaag aaattaaaag aaagtgagga
 360
 aaaggaagtg cttctgaaaa caaacctttc tggacggcag agcccaagtt tcaagctttc
 420
 cctgtccagt ggaacgaaga ctaacctcac cagccagtca tctacaacaa atctgcctgg
 480
 ttctccggga tcacctggat cccca
 505

<210> 3668

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3668

```

Met Arg Ser Ile Leu Arg Asn His Arg Tyr Arg Arg Asp Ala Arg Thr
 1           5           10           15
Leu Glu Asp Glu Glu Met Trp Phe Asn Thr Asp Glu Asp Asp Met
      20           25           30
Glu Asp Gly Glu Ala Val Val Ser Pro Ser Asp Lys Thr Lys Asn Asp
      35           40           45
Asp Asp Ile Met Asp Pro Ile Ser Lys Phe Met Glu Arg Lys Lys Leu
      50           55           60
Lys Glu Ser Glu Glu Lys Glu Val Leu Leu Lys Thr Asn Leu Ser Gly
65           70           75           80
Arg Gln Ser Pro Ser Phe Lys Leu Ser Leu Ser Ser Gly Thr Lys Thr
      85           90           95
Asn Leu Thr Ser Gln Ser Ser Thr Thr Asn Leu Pro Gly Ser Pro Gly
      100          105          110
Ser Pro Gly Ser Pro
      115

```

<210> 3669

<211> 1226

<212> DNA

<213> Homo sapiens

<400> 3669

```

cttgactccc agcattctca tctcaccttg ccatactata agatgtctgg tttgtctatg
60
gctgaggttc tggcccgcac ggactggaca gtagaggatg gattacagaa atacgagaga
120
ggattaatct tttacattaa tcattcactt tatgaaaacc tggatgaaga attaaatgaa
180
gaattagcag caaaagtggg tcagatgttt tatgtggctg agccaaagca agtgcccat
240
attctctgta gtccttctat gaagaatatt aatcctttaa ctgccatgag ctatctaagg
300
aagatggata cttctgggtt ttcattccatc ttagtgacac tgagcaaggc agcagtggca
360
ctgaaaatgg gagatcttga cgtgtacaga aatgaaatga aaagccatcc agagatgaag
420
ttggtgtgtg gcttcatttt ggaaccacgc ctgttgattc aacacaggaa gggacagatt
480
gttccaactg agcttgcgac tcacttgaag gagactcagc caggattgct tgtggcttca
540
gtcctgggat tgcagaagaa cagcaaaatt gggattgaag aagcagattc tttctttaag
600
gtgctttgtg gtaaggatga agataccatc cctcagctct tgatagactt ttgggaagct
660
cagctagtgg catgtctccc agatgtggta cttcaggaac tctttttcaa actcacatca
720
cagtacatct ggagattgtc taagaggcag cctcctgaca ccacaccatt gcgaacatcg
780
gaggatctga taaatgcctg tagtcattat ggettaattt atccatgggt tcacgtcgta
840

```

atatcatctg attcttttagc tgataaaaaat tatacagaag atctttcaaa attacagtct
 900
 cttatatgtg gtccttcatt tgacatagct tccattattc cgttcttgga gccactttca
 960
 gaagacacta ttgccggcct cagtgtccat gttctgtgtc gtacacgctt gaaagagtat
 1020
 gaacagtgca tagacatact gtttagagaga tgcccgagg cagtcattcc atatgctaat
 1080
 catgaactga aagaagagaa ccggactctg tgggtggaaaa aactgttgcc tgaactttgt
 1140
 cagagaataa aatgtggtgg agagaagtat caactctacc tgtcatcatt aaaagcttaa
 1200
 ttttcacggg aactgtggaa gctagc
 1226

<210> 3670

<211> 385

<212> PRT

<213> Homo sapiens

<400> 3670

Met	Ser	Gly	Leu	Ser	Met	Ala	Glu	Val	Leu	Ala	Arg	Thr	Asp	Trp	Thr
1				5					10					15	
Val	Glu	Asp	Gly	Leu	Gln	Lys	Tyr	Glu	Arg	Gly	Leu	Ile	Phe	Tyr	Ile
			20					25					30		
Asn	His	Ser	Leu	Tyr	Glu	Asn	Leu	Asp	Glu	Glu	Leu	Asn	Glu	Glu	Leu
			35				40					45			
Ala	Ala	Lys	Val	Val	Gln	Met	Phe	Tyr	Val	Ala	Glu	Pro	Lys	Gln	Val
	50					55				60					
Pro	His	Ile	Leu	Cys	Ser	Pro	Ser	Met	Lys	Asn	Ile	Asn	Pro	Leu	Thr
65					70				75					80	
Ala	Met	Ser	Tyr	Leu	Arg	Lys	Met	Asp	Thr	Ser	Gly	Phe	Ser	Ser	Ile
			85					90					95		
Leu	Val	Thr	Leu	Ser	Lys	Ala	Ala	Val	Ala	Leu	Lys	Met	Gly	Asp	Leu
			100					105					110		
Asp	Val	Tyr	Arg	Asn	Glu	Met	Lys	Ser	His	Pro	Glu	Met	Lys	Leu	Val
			115				120					125			
Cys	Gly	Phe	Ile	Leu	Glu	Pro	Arg	Leu	Leu	Ile	Gln	His	Arg	Lys	Gly
	130					135					140				
Gln	Ile	Val	Pro	Thr	Glu	Leu	Ala	Thr	His	Leu	Lys	Glu	Thr	Gln	Pro
145					150					155					160
Gly	Leu	Leu	Val	Ala	Ser	Val	Leu	Gly	Leu	Gln	Lys	Asn	Ser	Lys	Ile
			165					170					175		
Gly	Ile	Glu	Glu	Ala	Asp	Ser	Phe	Phe	Lys	Val	Leu	Cys	Gly	Lys	Asp
			180					185					190		
Glu	Asp	Thr	Ile	Pro	Gln	Leu	Leu	Ile	Asp	Phe	Trp	Glu	Ala	Gln	Leu
			195			200						205			
Val	Ala	Cys	Leu	Pro	Asp	Val	Val	Leu	Gln	Glu	Leu	Phe	Phe	Lys	Leu
	210					215					220				
Thr	Ser	Gln	Tyr	Ile	Trp	Arg	Leu	Ser	Lys	Arg	Gln	Pro	Pro	Asp	Thr
225					230					235				240	
Thr	Pro	Leu	Arg	Thr	Ser	Glu	Asp	Leu	Ile	Asn	Ala	Cys	Ser	His	Tyr
			245					250					255		
Gly	Leu	Ile	Tyr	Pro	Trp	Val	His	Val	Val	Ile	Ser	Ser	Asp	Ser	Leu

260 265 270
 Ala Asp Lys Asn Tyr Thr Glu Asp Leu Ser Lys Leu Gln Ser Leu Ile
 275 280 285
 Cys Gly Pro Ser Phe Asp Ile Ala Ser Ile Ile Pro Phe Leu Glu Pro
 290 295 300
 Leu Ser Glu Asp Thr Ile Ala Gly Leu Ser Val His Val Leu Cys Arg
 305 310 315 320
 Thr Arg Leu Lys Glu Tyr Glu Gln Cys Ile Asp Ile Leu Leu Glu Arg
 325 330 335
 Cys Pro Glu Ala Val Ile Pro Tyr Ala Asn His Glu Leu Lys Glu Glu
 340 345 350
 Asn Arg Thr Leu Trp Trp Lys Lys Leu Leu Pro Glu Leu Cys Gln Arg
 355 360 365
 Ile Lys Cys Gly Gly Glu Lys Tyr Gln Leu Tyr Leu Ser Ser Leu Lys
 370 375 380
 Ala
 385

<210> 3671

<211> 828

<212> DNA

<213> Homo sapiens

<400> 3671

nntacagcta agattcattt catcacgtttg atgcttagct gaaaaattac aataaattct
 60
 ccaatgaaat tatgtatctt tatttaatga aaatgcctgc tgcgtaccaa ggtatgtact
 120
 agggcatctg gggtaagtaa aaacaaacac atagagcctg cctggagaag ctcatgggtc
 180
 gatggaaaga taagcaagaa gagttaattt ctaatcaata tgataaaaag gtcagagagc
 240
 agttttctgaa aaacatgttt ttgagttgag tcctgaaaga caaggagatg ttagtaaagc
 300
 agagaaggga gaattcattc tagaaagatc agacaatgtg tgggaagggc agagtctgaa
 360
 aagagcatgc ccattttgga gaagcatcaa gaagcccacg cgttagaagc accggcccca
 420
 tgagacaaag acacagctag agagattgac taggcatgt cggaatgtcc tcttatttta
 480
 tacatacata agcatataga tacatatagc caaagttacc tttttaatga tcttttttac
 540
 ccagtgtatt ctggaggctg aatgggcaca tatgaacatc tccgagaggt tgtgtttggc
 600
 aaaagtgaag atgagcatta tcccctttgg aaatcagtca ttggagggat gatggctggg
 660
 gttattggcc agtttttagc caatccaact gacctagtga aggttcagat gcaaattgaa
 720
 ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca tgcatttgca
 780
 aaaatccttag ctgaaggagg aatacgaggg ctttgggcag gctgggta
 828

<210> 3672

<211> 124
 <212> PRT
 <213> Homo sapiens

<400> 3672
 Met Ser Glu Cys Pro Leu Ile Leu Tyr Ile His Lys His Ile Asp Thr
 1 5 10 15
 Tyr Ser Gln Ser Tyr Leu Phe Asn Asp Leu Phe Tyr Pro Val Tyr Ser
 20 25 30
 Gly Gly Arg Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly
 35 40 45
 Lys Ser Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly
 50 55 60
 Met Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
 65 70 75 80
 Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly Lys
 85 90 95
 Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile Leu Ala
 100 105 110
 Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val
 115 120

<210> 3673
 <211> 1052
 <212> DNA
 <213> Homo sapiens

<400> 3673
 nagatctcaa aatctggact tgaaaagaat tccttgatct atgaactttt ctctgttatg
 60
 gttcattctg ggagcgctgc tgggtggtcat tattatgcat gtataaagtc attcagtgat
 120
 gagcagtggc acagcttcaa tgatcaacat gtcagcagga taacacaaga ggacattaag
 180
 aaaacacatg gtggatcttc aggaagcaga ggatattatt ctagtgcctt cgcaagttcc
 240
 acaaatgcat atatgctgat ctatagactg aaggatccag ccagaaatgc aaaatttcta
 300
 gaagtggatg aatacccaga acatattaaa aacttggtgc agaaagagag agagttggaa
 360
 gaacaagaaa agagacaacg agaaattgag cgcaatacat gcaagataaa attattctgt
 420
 ttgcatccta caaaacaagt aatgatggaa aataaattgg aggttcataa ggataagaca
 480
 tttaaaggaag cagtagaaat ggcttataag atgatggatt tagaagaggt aataccctg
 540
 gattgctgtc gccttggtta atatgatgag tttcatgatt atctagaacg gtcatatgaa
 600
 ggagaagaag atacaccaat ggggcttcta ctaggtggcg tcaagtcaac atatatgttt
 660
 gatctgctgt tggagacgag aaagcctgat caggttttcc aatcttataa acctggaggg
 720
 gagccatttt acaccatttt tagttggtct gtacttagaa ttttctgag aaagggtttt
 780

tttttattgt agcaatgaac ataatttaca ttttgtatat ggtcttaca tgtagaataa
 840
 ttttgacagg ttgagaagta ctcagcacca gcttggaatt aagttctaga ttacttgcaa
 900
 agagttgtgt acataatttt aaaaacaaca aaaaacaaca aagcttctag cttacggctc
 960
 tcagtggggt tttttctctc cagtgggagg tactgaatca ttctggatgc tgtcaatccc
 1020
 taaagttatc aattgctctc ttaggaagat ct
 1052

<210> 3674

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3674

Xaa	Ile	Ser	Lys	Ser	Gly	Leu	Glu	Lys	Asn	Ser	Leu	Ile	Tyr	Glu	Leu
1			5						10					15	
Phe	Ser	Val	Met	Val	His	Ser	Gly	Ser	Ala	Ala	Gly	Gly	His	Tyr	Tyr
		20						25					30		
Ala	Cys	Ile	Lys	Ser	Phe	Ser	Asp	Glu	Gln	Trp	Tyr	Ser	Phe	Asn	Asp
		35					40					45			
Gln	His	Val	Ser	Arg	Ile	Thr	Gln	Glu	Asp	Ile	Lys	Lys	Thr	His	Gly
		50				55					60				
Gly	Ser	Ser	Gly	Ser	Arg	Gly	Tyr	Tyr	Ser	Ser	Ala	Phe	Ala	Ser	Ser
65				70					75					80	
Thr	Asn	Ala	Tyr	Met	Leu	Ile	Tyr	Arg	Leu	Lys	Asp	Pro	Ala	Arg	Asn
			85						90					95	
Ala	Lys	Phe	Leu	Glu	Val	Asp	Glu	Tyr	Pro	Glu	His	Ile	Lys	Asn	Leu
			100					105					110		
Val	Gln	Lys	Glu	Arg	Glu	Leu	Glu	Gln	Glu	Lys	Arg	Gln	Arg	Glu	
		115				120					125				
Ile	Glu	Arg	Asn	Thr	Cys	Lys	Ile	Lys	Leu	Phe	Cys	Leu	His	Pro	Thr
		130				135					140				
Lys	Gln	Val	Met	Met	Glu	Asn	Lys	Leu	Glu	Val	His	Lys	Asp	Lys	Thr
145				150					155					160	
Leu	Lys	Glu	Ala	Val	Glu	Met	Ala	Tyr	Lys	Met	Met	Asp	Leu	Glu	Glu
			165					170					175		
Val	Ile	Pro	Leu	Asp	Cys	Cys	Arg	Leu	Val	Lys	Tyr	Asp	Glu	Phe	His
			180					185					190		
Asp	Tyr	Leu	Glu	Arg	Ser	Tyr	Glu	Gly	Glu	Glu	Asp	Thr	Pro	Met	Gly
		195				200					205				
Leu	Leu	Leu	Gly	Gly	Val	Lys	Ser	Thr	Tyr	Met	Phe	Asp	Leu	Leu	Leu
		210				215					220				
Glu	Thr	Arg	Lys	Pro	Asp	Gln	Val	Phe	Gln	Ser	Tyr	Lys	Pro	Gly	Gly
225				230					235					240	
Glu	Pro	Phe	Tyr	Thr	Ile	Phe	Ser	Trp	Ser	Val	Leu	Arg	Ile	Phe	Leu
			245					250					255		
Arg	Lys	Val	Phe	Phe	Leu	Leu									
			260												

<210> 3675

<211> 837

<212> DNA

<213> Homo sapiens

<400> 3675

```

nntccggaga tgtgaagaag gggggcgagc ggacaggaag atgaagggag caaagctgcc
60
cgccgcggga caggcgtcta ggtgaacaag aaaatgaccg aagaaacaca cccagacgat
120
gacagctata ttgtgctgtg caaggctgtg gttatgacca gagatgactc cagcggggga
180
tggttcccac aggaaggagg cgggatcagt cgcgtcgggg tctgtaaggt catgcacccc
240
gaaggcaatg gacgaagcgg ctttctcatc catggtgaac gacagaaaga caaactggtg
300
gtattggaat gctatgtaag aaaggacttg gtctacacca aagccaatcc aacgtttcat
360
cactggaagg tcgataatag gaagtttgga cttactttcc aaagccctgc tgatgccga
420
gcctttgaca ggggagtaag gaaagcaatc gaagacctta tagaagaagt agaaaatgat
480
tctggcgggc ccagaaggct cctggcctac ccactgtcct cctgtaatca gaggcccagg
540
gtgtacagct gccactgaaa aggaaaggga tctgtgacct ctggagccct ggttcggttt
600
aggcccttgg ctatgggtaa gtgagtagta ggcattgtgt tacatctgat cgtggcctgg
660
agggcccttg ggcagtcagt tctcatggtg ggcttgacta gagtccacag atgcaaacac
720
aaaaattctc cactgcagca catccaggta tcaaatacaga gggttaaaga agccatagac
780
agggccctgt gaagaaagaa atatcaagca aggcattgta ataccaaatt cagatct
837

```

<210> 3676

<211> 154

<212> PRT

<213> Homo sapiens

<400> 3676

```

Met Thr Glu Glu Thr His Pro Asp Asp Ser Tyr Ile Val Arg Val
1          5          10          15
Lys Ala Val Val Met Thr Arg Asp Asp Ser Ser Gly Gly Trp Phe Pro
20          25          30
Gln Glu Gly Gly Gly Ile Ser Arg Val Gly Val Cys Lys Val Met His
35          40          45
Pro Glu Gly Asn Gly Arg Ser Gly Phe Leu Ile His Gly Glu Arg Gln
50          55          60
Lys Asp Lys Leu Val Val Leu Glu Cys Tyr Val Arg Lys Asp Leu Val
65          70          75          80
Tyr Thr Lys Ala Asn Pro Thr Phe His His Trp Lys Val Asp Asn Arg
85          90          95
Lys Phe Gly Leu Thr Phe Gln Ser Pro Ala Asp Ala Arg Ala Phe Asp
100          105          110
Arg Gly Val Arg Lys Ala Ile Glu Asp Leu Ile Glu Glu Val Glu Asn

```

```

      115              120              125
Asp Ser Gly Gly Pro Arg Arg Leu Leu Ala Tyr Pro Leu Ser Ser Cys
      130              135              140
Asn Gln Arg Pro Arg Val Tyr Ser Cys His
      145              150

```

<210> 3677
 <211> 418
 <212> DNA
 <213> Homo sapiens

```

<400> 3677
nnggaagaag gcccttctca aaatggactg gtgttgacagg gtgagaagct gccccctgac
60
ttcatgccaa agctcgtaaa gaatctccta ggcgagatgc ctctgtgggt ctgccagagt
120
tgccgaaaga gcatggagga agatgaaagg cagacaggtc gagaacatgc agtggcgatc
180
tccttgtcac acacatcctg caaatcacag tcttgtggag atgactctca ttcgtctctg
240
tcttctctct catcctctct atcctctctc tctctctctc gccctgggaa ctggggagac
300
tgggatccta gctcgttctt gtcggcacat aagctctcgg gcctctggaa ttccccacat
360
tccagtgggg ccattgccagg cagctctctt gggagtctct ctaccatccc tggcgcgcc
418

```

<210> 3678
 <211> 139
 <212> PRT
 <213> Homo sapiens

```

<400> 3678
Xaa Glu Glu Gly Pro Ser Gln Asn Gly Leu Val Leu Gln Gly Glu Lys
 1              5              10              15
Leu Pro Pro Asp Phe Met Pro Lys Leu Val Lys Asn Leu Leu Gly Glu
      20              25              30
Met Pro Leu Trp Val Cys Gln Ser Cys Arg Lys Ser Met Glu Glu Asp
      35              40              45
Glu Arg Gln Thr Gly Arg Glu His Ala Val Ala Ile Ser Leu Ser His
      50              55              60
Thr Ser Cys Lys Ser Gln Ser Cys Gly Asp Asp Ser His Ser Ser Ser
      65              70              75              80
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Cys Pro Gly
      85              90              95
Asn Ser Gly Asp Trp Asp Pro Ser Ser Phe Leu Ser Ala His Lys Leu
      100             105             110
Ser Gly Leu Trp Asn Ser Pro His Ser Ser Gly Ala Met Pro Gly Ser
      115             120             125
Ser Leu Gly Ser Pro Pro Thr Ile Pro Gly Ala
      130             135

```

<210> 3679
 <211> 567

<212> DNA

<213> Homo sapiens

<400> 3679

cgcgtgaagg gctatgacct ggagttaagt atggcgctgg ggacatacta cccacctccc
 60
 cgcctcaggc agctgctccc catgcttctt cagggaaaca gtatcttcac tgcccctaag
 120
 gagatcgag agatcaaggc ccagctggag acagccctga agtggaggaa ctatgaggtg
 180
 aagctcgggc tgctgctgca cctggaggaa ctgcagatgg agcatgatat ccggcactat
 240
 gacctggagt cggtgcccat gacctgggac cctgtggacc agaaccacag gctgctcacg
 300
 ctggaggttc ctggagtgc tgagagccgc ccctcagtgc tacggggcga ccacctgttt
 360
 gcccttttgt cctcgagac acaccaggag gaccccatca catataaggg ctttgtgcac
 420
 aaggtggaat tggacctgt caagctgagc tttccatga gcctcctgag ccgctttgtg
 480
 gatgggctga ccttcaaggc gaactttacc ttcaaccgcc agccgctgcy agtccagcac
 540
 cgtgcctggg agttgacagg gcgctgg
 567

<210> 3680

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3680

Arg Val Lys Gly Tyr Asp Leu Glu Leu Ser Met Ala Leu Gly Thr Tyr
 1 5 10 15
 Tyr Pro Pro Pro Arg Leu Arg Gln Leu Leu Pro Met Leu Leu Gln Gly
 20 25 30
 Thr Ser Ile Phe Thr Ala Pro Lys Glu Ile Ala Glu Ile Lys Ala Gln
 35 40 45
 Leu Glu Thr Ala Leu Lys Trp Arg Asn Tyr Glu Val Lys Leu Arg Leu
 50 55 60
 Leu Leu His Leu Glu Glu Leu Gln Met Glu His Asp Ile Arg His Tyr
 65 70 75 80
 Asp Leu Glu Ser Val Pro Met Thr Trp Asp Pro Val Asp Gln Asn Pro
 85 90 95
 Arg Leu Leu Thr Leu Glu Val Pro Gly Val Thr Glu Ser Arg Pro Ser
 100 105 110
 Val Leu Arg Gly Asp His Leu Phe Ala Leu Leu Ser Ser Glu Thr His
 115 120 125
 Gln Glu Asp Pro Ile Thr Tyr Lys Gly Phe Val His Lys Val Glu Leu
 130 135 140
 Asp Arg Val Lys Leu Ser Phe Ser Met Ser Leu Leu Ser Arg Phe Val
 145 150 155 160
 Asp Gly Leu Thr Phe Lys Val Asn Phe Thr Phe Asn Arg Gln Pro Leu
 165 170 175
 Arg Val Gln His Arg Ala Trp Glu Leu Thr Gly Arg Trp

180

185

<210> 3681
 <211> 788
 <212> DNA
 <213> Homo sapiens

<400> 3681
 nntgggcagt gtactcgggc ctccccgaca gcagctcctg tggggagcgc tcaccaccac
 60
 ccccgctcc acttccttcg gatgaggccc tgctgactg tgcctggaa ggaaagctcc
 120
 gagaccggga ggagagctt cagcagctgc gggacagcct ggggctgagc atggagcagc
 180
 gcggcggagg tcgcctgca ggcgctggc caggcctgag cctctgccac catggccatt
 240
 gtgcagactc tgccagtgcc actggagcct gctcctgaag ctgccactgc cccacaagct
 300
 ccagtcattg gtagtgtag cagccttate tcaggccggc cctgtcccg ggggccagct
 360
 cctccccgcc accacggccc tcctgggccc acctcttcc gccagcagga tggcctgcta
 420
 cggggtggct atgaggcaca ggagccgctg tgcccagctg tgccccctag gaaggctgtc
 480
 cctgtacca gcttcaccta catcaatgag gacttcggga cagagtcacc cccagccca
 540
 agcagtgatg ttgaggatgc ccgagagcag cgggcacaca atgccacct ccgcgccca
 600
 ccaccaaagc tcattcctgt ctctggaaag ctggagaaga acatagagaa gatcctgatc
 660
 cgcccaacag cctcaagcc agtctgccc aaacctcgag gggctccgtc cctgcctagc
 720
 ttcattgggtc ctggggccac cgggctgtct gggagccagg gcagcctgac gcagctgttt
 780
 gggggccc
 788

<210> 3682
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 3682
 Met Ala Ile Val Gln Thr Leu Pro Val Pro Leu Glu Pro Ala Pro Glu
 1 5 10 15
 Ala Ala Thr Ala Pro Gln Ala Pro Val Met Gly Ser Val Ser Ser Leu
 20 25 30
 Ile Ser Gly Arg Pro Cys Pro Gly Gly Pro Ala Pro Pro Arg His His
 35 40 45
 Gly Pro Pro Gly Pro Thr Phe Arg Gln Gln Asp Gly Leu Leu Arg
 50 55 60
 Gly Gly Tyr Glu Ala Gln Glu Pro Leu Cys Pro Ala Val Pro Pro Arg
 65 70 75 80
 Lys Ala Val Pro Val Thr Ser Phe Thr Tyr Ile Asn Glu Asp Phe Arg

				85						90					95				
Thr	Glu	Ser	Pro	Pro	Ser	Pro	Ser	Ser	Asp	Val	Glu	Asp	Ala	Arg	Glu				
			100					105					110						
Gln	Arg	Ala	His	Asn	Ala	His	Leu	Arg	Gly	Pro	Pro	Pro	Lys	Leu	Ile				
		115					120					125							
Pro	Val	Ser	Gly	Lys	Leu	Glu	Lys	Asn	Ile	Glu	Lys	Ile	Leu	Ile	Arg				
	130					135					140								
Pro	Thr	Ala	Phe	Lys	Pro	Val	Leu	Pro	Lys	Pro	Arg	Gly	Ala	Pro	Ser				
145					150					155				160					
Leu	Pro	Ser	Phe	Met	Gly	Pro	Arg	Ala	Thr	Gly	Leu	Ser	Gly	Ser	Gln				
			165						170				175						
Gly	Ser	Leu	Thr	Gln	Leu	Phe	Gly	Gly											
		180					185												

<210> 3683

<211> 4421

<212> DNA

<213> Homo sapiens

<400> 3683

gcggcgcgtc gcgcgcagcc ccgcacctcc gccctgcct ctgcctcctg ggccatgccc
 60
 tgctgtttac atgcgggtga ggtccccggc cgctccgaac cctccgagc cccggctccc
 120
 cgaggggtgaa gcccgcggc ccgcgaactg gactggtgga tctctcagac ctggggcccc
 180
 ggactccgat ctccgcgtc tccgccacca tcagggcggg atccggtctt ggtgttttga
 240
 ggaggggggtg tgggttaggg aaaggaatcc cgctcccttc cactttttt cgccttcggg
 300
 gcttcagact cagggaactc gctcatggct ttcttgatga agaagaagaa attcaaattc
 360
 caaactactt tcacctgga ggagctgact gcggttccct tcgtgaacgg ggtcctcttc
 420
 tgcaagggtc ggctgctgga tggaggggat tttgtcagct tgcgtcaag ggaggaggta
 480
 caggagaact gtgtgcggtg gcgaaagagg ttcaccttcg tgtgtaagat gagtgctaac
 540
 ccggccaccg gcctgctgga cccctgtgtc ttccgtgtgt ctgtgcgcaa ggagctgaaa
 600
 ggcggggaagg cttattccaa gctgggcttc gctgacttga acctggccga gtttgcgggc
 660
 tcgggctcca cggtgcgctg ctgcctgctc gagggatatg acacgaagaa cactcgccag
 720
 gacaactcca tccttaaggt caccattggt atgttcctgc tctctggaga tccctgcttc
 780
 aagacgccac catcgactgc caagtccatc tccatcccag gccaggattc ctccctgcag
 840
 ctgacgtgta aggggtggtg gaccagcagt gggggcagca gcaccaactc cctgactggg
 900
 tcccgcccc ccaaggctcg gccactatt ctgagctcag ggctgccaga ggaaccgcag
 960
 cagaacctgt ccagccctga ggaggtgttc cactctggcc actcccgcaa ctccagctat
 1020

gccagccagc agtccaagat ctccggctac agcacagagc actcgcactc etccagcctc
1080
tcagacctga cgcaccgccg caacacgtcc accagcagca gcgcctctgg gggccttggc
1140
atgaccgtgg agggccctga gggcagtga ggggagcacc gggccccgga gaagccgccg
1200
cggccacccc ggccctgca tctgtccgat cgctctttca ggcggaagaa ggactcggtg
1260
gagagccacc cgacctgggt ggacgacacg cggatcgatg cggatgccat cgtggagaag
1320
atcgtgcaga gccaggactt cacagatggc agcaacaccg aggacagcaa cctccggctg
1380
ttcgtgagcc gcgatggctc tgccacgctg agcgcatcc agcttgccac cagggtctct
1440
tctggggtct acgagccagt tgtgattgaa agccattgag gagcagggtg cggggctgga
1500
gaagagtcct gctttctctg gagtccagac ctgtatcatt ccatgaggaa ctttccccct
1560
cagatcacct ctgcgccaca tctcatccat gctcctcca tgcactccag tccacactcc
1620
ccgtagcatc attccattgc cctcccatc catgctggga cctcctggc ccaccaaggc
1680
ccaggcacca ctgtgaatat tctcctctga accactagag ggcaggccag gcaggccagg
1740
cgggcccgtg cagcttgtgg gcaagaagga gctggcaagg accggcgctg ctggagactg
1800
accagccct ctggtgagg acatgcagca gctcctaaat gtagagatgc ctgtggctga
1860
gggggacctc ctacctgtgt cccactcac tccaggagca ctggctttgg tcacgtctta
1920
gcagcagggc cttgtccgt tgttccctg ccttggtggt gggggggcca gaccgcctcc
1980
ggaatcctgc cacctgtgac tgtctgactg cttagtgett cagctgtccc ttccttgtgt
2040
cctgggggac ctgctggcgg cctcttctg ggagccatga cctcagaccc caccacact
2100
ccagatcgag acccctgcct cccccggca aatgtctcc cgtgccttg cagcctgcac
2160
tttgacatg ctcaccccca gcacagtccc actggccct caccctccc tccctgagct
2220
ccttcccaag gactcctggt cactgcctgc tgtgcagtca gaggcccagg gtccagcagc
2280
ccggcgggaa cgggtgctgc ctcttctcc agttagctcc agctcaggtc tgagaccgt
2340
gctgagaaaag gtctgagcac cgaccgtgcc ctctgcccag ggctgggtcc tgagcagctg
2400
gttttctgc aggaagggtg gagcaagcaa agtcttctc tgccctcagg gtcagctgcc
2460
cagactgggg cggatgccag agaggcaggt gggctgtggc tggactggtc cggagctggc
2520
ttccttacca gaaaagctc agccttctc tggaagcatc cccggttctg ggcaaggggg
2580
aagggtcct ttaaggggtg tgcttccca gtggggagca gtctggccct gcccctact
2640

aaagcctctg ctctcagcac ttcccccaa gtccctgtaa cttgcttgaa ggtgggttct
2700
ggctgccagc cagtcacctg acaaaactctc ctgccccctt taaatttcac tcattttgta
2760
taaaccagc aggctgggtg ttacttagcc ctgtagcttt tttcattttt tctttccgtc
2820
tttcttcttg agttcacggg tcaatattgc ctccctcgccc tggtagaggg aggtgctgct
2880
tttctgcccc acctgccggc tgggtccagc agcgtgggg cccagctggg gggccgggat
2940
gggggcttct ctctctggga ggggtgcagg tgccctcccc aggctgggag ggttccttcc
3000
ctagctcccc atctgcccc gctggtgaga gttgggcttc ttggtcttg aactccctgg
3060
cattgggaac agagcatttc cagcatttgt tgttgttgtt ttactcacct aacccttaga
3120
aaatgaatgt tagaagggtg ctgccgaggc gggacagagt gtttgctcgc gctggagaag
3180
gctctgctca gccctgagag tcccttcttg cccaccgat actggcactt taaaaaggaa
3240
gctgaccgca cagtgtccag acgaattggc cccagaaga tggggagttc tgtcctgccc
3300
ttctgtgtct gcgtgacctc acccagccta ggaggaggt gcattcagg tagatttgcc
3360
tctcattcaa agttctgggg ctttggggcg aaaacagcca gctttggcgc tgttggggag
3420
actcctccag accaggaacc ccagaaggag acagagcctg ccacatcctc ccacgccagg
3480
ccctgggcca ggggtattgg actgagaatt tggccacaac caaattgatg ctggctggaa
3540
ccagaggcca gaaagcctgg ccttgctccc atgtgggagc cctgtcctca gccctcttgt
3600
ccccttgagc tcagtgaatt cccaccaggt gccacagct cctggacttc aaattctata
3660
tattgagaga gttggagagt atatcagaga tatttttgga aaggagttgg tctatgcaat
3720
gtcagtttg aatcttcttg aaagttaat gtttttatta ggagatttaa agaaaataaa
3780
ggtctacaat atcttttagt tttttttttt tctgtttac cgcacaaact gaccacatgg
3840
catgtctatc aggatggagg gtgtccatgt tctcctctgt ctttagggag gtgataagga
3900
gatgggcgga ggggtgtttt tttctttgac tcccctcctt tctaacagaa tgttgccacc
3960
actgcttgag tgggctgtgt ttgttctct gtcccagctt cttgttactt tatcatattg
4020
actttagggt caaaggcaac atcagaagaa gtcagatatg tatagtgaca ttccaggggt
4080
ggggaagggt tagggatcca ggttctctcc ggtcttgcc acaggcaca tcatcacctt
4140
catcgttcca gattcctggg gagaaaactg agaagatcgt tacctgccag cctcatacgg
4200
agcaaaagct ctgtcctcag ggccaagtgc taaccactgc tctgtagacc ttctctgcaa
4260

tcaagtggcc tctaaggagc atgcctgagg acaaataact gtgcctcagt ttcctcacct
 4320
 gcagatgggg ttatcaaata acacgagtgt gcagcctgac ctgcaggagg tgtgagtgtg
 4380
 ttcccaaact aaagccccag gctgccatca tttacaggct a
 4421

<210> 3684

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3684

Met	Ala	Phe	Leu	Met	Lys	Lys	Lys	Lys	Phe	Lys	Phe	Gln	Thr	Thr	Phe
1				5					10					15	
Thr	Leu	Glu	Glu	Leu	Thr	Ala	Val	Pro	Phe	Val	Asn	Gly	Val	Leu	Phe
			20					25					30		
Cys	Lys	Val	Arg	Leu	Leu	Asp	Gly	Gly	Asp	Phe	Val	Ser	Leu	Ser	Ser
		35					40					45			
Arg	Glu	Glu	Val	Gln	Glu	Asn	Cys	Val	Arg	Trp	Arg	Lys	Arg	Phe	Thr
	50					55					60				
Phe	Val	Cys	Lys	Met	Ser	Ala	Asn	Pro	Ala	Thr	Gly	Leu	Leu	Asp	Pro
65					70					75				80	
Cys	Val	Phe	Arg	Val	Ser	Val	Arg	Lys	Glu	Leu	Lys	Gly	Gly	Lys	Ala
				85					90					95	
Tyr	Ser	Lys	Leu	Gly	Phe	Ala	Asp	Leu	Asn	Leu	Ala	Glu	Phe	Ala	Gly
			100					105					110		
Ser	Gly	Ser	Thr	Val	Arg	Cys	Cys	Leu	Leu	Glu	Gly	Tyr	Asp	Thr	Lys
		115					120					125			
Asn	Thr	Arg	Gln	Asp	Asn	Ser	Ile	Leu	Lys	Val	Thr	Ile	Gly	Met	Phe
	130					135					140				
Leu	Leu	Ser	Gly	Asp	Pro	Cys	Phe	Lys	Thr	Pro	Pro	Ser	Thr	Ala	Lys
145					150					155				160	
Ser	Ile	Ser	Ile	Pro	Gly	Gln	Asp	Ser	Ser	Leu	Gln	Leu	Thr	Cys	Lys
			165						170					175	
Gly	Gly	Gly	Thr	Ser	Ser	Gly	Gly	Ser	Ser	Thr	Asn	Ser	Leu	Thr	Gly
			180					185					190		
Ser	Arg	Pro	Pro	Lys	Ala	Arg	Pro	Thr	Ile	Leu	Ser	Ser	Gly	Leu	Pro
	195						200						205		
Glu	Glu	Pro	Asp	Gln	Asn	Leu	Ser	Ser	Pro	Glu	Glu	Val	Phe	His	Ser
	210					215						220			
Gly	His	Ser	Arg	Asn	Ser	Ser	Tyr	Ala	Ser	Gln	Gln	Ser	Lys	Ile	Ser
225				230						235				240	
Gly	Tyr	Ser	Thr	Glu	His	Ser	His	Ser	Ser	Ser	Leu	Ser	Asp	Leu	Thr
			245						250					255	
His	Arg	Arg	Asn	Thr	Ser	Thr	Ser	Ser	Ser	Ala	Ser	Gly	Gly	Leu	Gly
			260					265					270		
Met	Thr	Val	Glu	Gly	Pro	Glu	Gly	Ser	Glu	Arg	Glu	His	Arg	Pro	Pro
	275						280						285		
Glu	Lys	Pro	Pro	Arg	Pro	Pro	Arg	Pro	Leu	His	Leu	Ser	Asp	Arg	Ser
	290					295					300				
Phe	Arg	Arg	Lys	Lys	Asp	Ser	Val	Glu	Ser	His	Pro	Thr	Trp	Val	Asp
305				310						315				320	
Asp	Thr	Arg	Ile	Asp	Ala	Asp	Ala	Ile	Val	Glu	Lys	Ile	Val	Gln	Ser

gcaccctgac ccccatccct accccaggag ctgctgaaat gtcctcagag cttaggcgtg
 1260
 aagcaggggt tggtcagggg aggacagcgg ccg
 1293

<210> 3686
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 3686
 Met Gly Glu Gly Gly Tyr Arg Leu Thr Gly Trp Arg Asp Val Ser Gln
 1 5 10 15
 Ala Pro Ser Pro Leu Ser Ser Gly Ala His Cys Arg Leu Leu Leu Phe
 20 25 30
 Pro Val Cys Cys Glu Thr Asp His Arg Pro Ala Gln Arg Ser Pro Arg
 35 40 45
 Arg Val Pro Cys Leu Cys Pro Pro Arg Arg Arg His Pro Pro Arg Ser
 50 55 60
 Phe Thr Ser Cys Thr Phe Ser Gly Ser Arg Ser His Ile His Pro Thr
 65 70 75 80
 Trp Arg Ser Pro His Asp Val Pro Gly Ser Val Leu Ala Pro Ala Ala
 85 90 95
 Ala Leu Gly Asn Arg Ile Gly Lys Arg Ser Pro Arg Val Asp Ala
 100 105 110

<210> 3687
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 3687
 nncggggcca agctcaaagc ttccagccgc acgtctgect tgctctcggg cttcgccatg
 60
 gtggccatgg tggagggtgca gctggagagt gaccacgagt acccaccagg cctgctgggtg
 120
 gctgtgcacc tctttgcact catgngtctc cacgtgtctg ctgccccaca ttgaagctgt
 180
 nngagcaaca tcacaaacct caactctgtc caccagtcgc cacaccagag actgcaccgc
 240
 tacgtggagc tggcctgggg cttctccact gccctgggca cctttctctt ccttgctgaa
 300
 gttgtcctgg ttggttgggt caagtttgtg cccattgggg ctcccttgga cacaccgacc
 360
 cccatggtgc ccacatcccg ggtgcccggg actctggcac cagtggctac ctcccttagt
 420
 ccagcttcca atctcccacg gtctctcgct tctgcagcac cgtcccaggc tgagccagcc
 480
 tgcccccccc ggcaagcctg tgggtggtgt ggggcccatt ggccaggctg gcaagcagcc
 540
 atggcctcca cagccatcat ggtacc
 566

<210> 3688

<211> 57
 <212> PRT
 <213> Homo sapiens

<400> 3688
 Xaa Gly Ala Lys Leu Lys Ala Ser Ser Arg Thr Ser Ala Leu Leu Ser
 1 5 10 15
 Gly Phe Ala Met Val Ala Met Val Glu Val Gln Leu Glu Ser Asp His
 20 25 30
 Glu Tyr Pro Pro Gly Leu Leu Val Ala Val His Leu Phe Ala Leu Met
 35 40 45
 Xaa Leu His Val Ser Ala Ala Pro His
 50 55

<210> 3689
 <211> 1562
 <212> DNA
 <213> Homo sapiens

<400> 3689
 ggggttggggg ggccggagca gagagcacc agcccgagg gtggatgaat gtgggagaaa
 60
 atggagacca agacgatcgt gtacgacttg gacacatcag gggggctgat ggagcaaate
 120
 caagctctgc tggtccccc caagacggac gaggcagaaa agcgcagtcg gaagcctgag
 180
 aaggagcccc ggagaagcgg cagggccacc aaccacgaca gctgcgatag ctgcaaggaa
 240
 ggtggagatc tcctgtgctg cgaccactgc ccggctgcct tccacctcca gtgtgttaac
 300
 cctccactga gtgaagaaat gttgcctcct ggagagtggg tgtgtcaccg gtgcactgtt
 360
 cgccgaaaga aacgagagca gaaaaaggag ctgggtcatg tcaatggact ggtggacaaa
 420
 tctggcaaac ggactacatc ccccgagcgt gacactgact tgttggaacag atcgccagc
 480
 aaaactgaac taaaggccat tgcccatgcc cggatcctgg aaaggagagc cagcaggcct
 540
 ggcacaccca catccagcgc cagcacagag actccacact ctgagcagaa tgatgtcgac
 600
 gaagacatca ttgacgtgga tgaggaacca gtagcagcgg agccagacta tgtgcagccc
 660
 cagctgaggg ggccttttga gctgtgatt gctgccgcca tggagcggaa cccacccaa
 720
 tttcagttgc ccaatgaact gacttgtacc actgcactac caggttctag caagaggaga
 780
 agaaaggagg aaaccacagg gaaaaatgtt aagaagacac agcatgaatt agatcacaat
 840
 ggtctcgttc ccttaccctg caaagtctgc ttacagtgtg acaggagttg ccgtgtggct
 900
 cctctcatcc agtgtgacta ttgccctctc ctgtttcaca tggattgcct cgagccgccc
 960
 ctactgccca tgccctggg cagatggatg tgtccgaatc acatcgaaca tgtggtgctg
 1020

aaccagaaga atatgacact gagcaatcgg tgccagggtgt ttgatcgttt ccaggacacc
1080
gtttcgcagc atgtcgtcaa agtggacttc ctgaaccgaa tccacaagaa gcacccccct
1140
aaccggcgtg tgctccagtc ggtcaaaaga agaagcttga aggttcctga tgctataaaa
1200
tctcagtacc agtttccacc ccctctcatt gcaccgcggg ccattcggga cggggagctg
1260
atctgcaatg ggatccctga ggaatcacag atgcaccttt tgaactctga gcacttagcc
1320
acccaagcag agcagcaaga gtggctctgt agtggtgttg cgctccagtg cagcatattg
1380
aaacatttat ctgctaagca gatgccttcg cattgggact ctgaacagac agagaaggct
1440
gatattaagc ctgttattgt gactgacagc tcagtcacca cctccctgca aacagctgac
1500
aagacaccta caccttccca ctacccttg tctgcccct cagggattag caccagaat
1560
tc
1562

<210> 3690

<211> 504

<212> PRT

<213> Homo sapiens

<400> 3690

Met	Trp	Glu	Lys	Met	Glu	Thr	Lys	Thr	Ile	Val	Tyr	Asp	Leu	Asp	Thr
1				5					10				15		
Ser	Gly	Gly	Leu	Met	Glu	Gln	Ile	Gln	Ala	Leu	Leu	Ala	Pro	Pro	Lys
			20					25					30		
Thr	Asp	Glu	Ala	Glu	Lys	Arg	Ser	Arg	Lys	Pro	Glu	Lys	Glu	Pro	Arg
		35					40					45			
Arg	Ser	Gly	Arg	Ala	Thr	Asn	His	Asp	Ser	Cys	Asp	Ser	Cys	Lys	Glu
	50					55					60				
Gly	Gly	Asp	Leu	Leu	Cys	Cys	Asp	His	Cys	Pro	Ala	Ala	Phe	His	Leu
65					70				75					80	
Gln	Cys	Cys	Asn	Pro	Leu	Ser	Glu	Glu	Met	Leu	Pro	Pro	Gly	Glu	
			85					90					95		
Trp	Met	Cys	His	Arg	Cys	Thr	Val	Arg	Arg	Lys	Lys	Arg	Glu	Gln	Lys
			100					105					110		
Lys	Glu	Leu	Gly	His	Val	Asn	Gly	Leu	Val	Asp	Lys	Ser	Gly	Lys	Arg
			115				120					125			
Thr	Thr	Ser	Pro	Ser	Ser	Asp	Thr	Asp	Leu	Leu	Asp	Arg	Ser	Ala	Ser
	130					135					140				
Lys	Thr	Glu	Leu	Lys	Ala	Ile	Ala	His	Ala	Arg	Ile	Leu	Glu	Arg	Arg
145					150					155				160	
Ala	Ser	Arg	Pro	Gly	Thr	Pro	Thr	Ser	Ser	Ala	Ser	Thr	Glu	Thr	Pro
			165					170					175		
Thr	Ser	Glu	Gln	Asn	Asp	Val	Asp	Glu	Asp	Ile	Ile	Asp	Val	Asp	Glu
			180					185				190			
Glu	Pro	Val	Ala	Ala	Glu	Pro	Asp	Tyr	Val	Gln	Pro	Gln	Leu	Arg	Arg
		195				200					205				
Pro	Phe	Glu	Leu	Leu	Ile	Ala	Ala	Ala	Met	Glu	Arg	Asn	Pro	Thr	Gln

```

      210              215              220
Phe Gln Leu Pro Asn Glu Leu Thr Cys Thr Thr Ala Leu Pro Gly Ser
225              230              235              240
Ser Lys Arg Arg Arg Lys Glu Glu Thr Thr Gly Lys Asn Val Lys Lys
      245              250              255
Thr Gln His Glu Leu Asp His Asn Gly Leu Val Pro Leu Pro Val Lys
      260              265              270
Val Cys Phe Thr Cys Asn Arg Ser Cys Arg Val Ala Pro Leu Ile Gln
      275              280              285
Cys Asp Tyr Cys Pro Leu Leu Phe His Met Asp Cys Leu Glu Pro Pro
      290              295              300
Leu Thr Ala Met Pro Leu Gly Arg Trp Met Cys Pro Asn His Ile Glu
305              310              315              320
His Val Val Leu Asn Gln Lys Asn Met Thr Leu Ser Asn Arg Cys Gln
      325              330              335
Val Phe Asp Arg Phe Gln Asp Thr Val Ser Gln His Val Val Lys Val
      340              345              350
Asp Phe Leu Asn Arg Ile His Lys Lys His Pro Pro Asn Arg Arg Val
      355              360              365
Leu Gln Ser Val Lys Arg Arg Ser Leu Lys Val Pro Asp Ala Ile Lys
370              375              380
Ser Gln Tyr Gln Phe Pro Pro Pro Leu Ile Ala Pro Ala Ala Ile Arg
385              390              395              400
Asp Gly Glu Leu Ile Cys Asn Gly Ile Pro Glu Glu Ser Gln Met His
      405              410              415
Leu Leu Asn Ser Glu His Leu Ala Thr Gln Ala Glu Gln Gln Glu Trp
      420              425              430
Leu Cys Ser Val Val Ala Leu Gln Cys Ser Ile Leu Lys His Leu Ser
      435              440              445
Ala Lys Gln Met Pro Ser His Trp Asp Ser Glu Gln Thr Glu Lys Ala
      450              455              460
Asp Ile Lys Pro Val Ile Val Thr Asp Ser Ser Val Thr Thr Ser Leu
465              470              475              480
Gln Thr Ala Asp Lys Thr Pro Thr Pro Ser His Tyr Pro Leu Ser Cys
      485              490              495
Pro Ser Gly Ile Ser Thr Gln Asn
500

```

<210> 3691

<211> 418

<212> DNA

<213> Homo sapiens

<400> 3691

```

ncggccgccc agttcgacgg gaggtggccc aggc aaatag tgtcatcgat tggcctatgt
60
cgttatgggtg ggaggattga ctgctgctgg ggctgggctc gccagtcttg gggacagtgt
120
cagcctttct acgtcttaag gcagagaata gccaggataa ggtgccagct caaagctgtg
180
tgccaaccac gatgcaaaca tggatgaatgt atcggggccaa acaagtgcaa gtgtcatcct
240
ggttatgctg gaaaaacctg taatcaaggt aggaaaacag tctgacataa atacacaatc
300

```

gaagacacct ctatcactcc caaattaaaa atattcttat ctcaaactac tttccatggc
 360
 tattttttcca aaatatgtga gctgccattt tgctgataaa taaaaatata ttaatgat
 418

<210> 3692

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3692

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser
1				5					10					15	
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp
		20						25					30		
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Phe	Tyr	Val	Leu	Arg	Gln
		35					40					45			
Arg	Ile	Ala	Arg	Ile	Arg	Cys	Gln	Leu	Lys	Ala	Val	Cys	Gln	Pro	Arg
	50					55					60				
Cys	Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro
65					70				75					80	
Gly	Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Gly	Arg	Lys	Thr	Val		
			85						90						

<210> 3693

<211> 2641

<212> DNA

<213> Homo sapiens

<400> 3693

cggccgcgctc gacgggaaag agccgctaga gcagaccgcg ccgccgccgg agccgcgcct
 60
 gccacggccc ggggagggag gaggcgggag tcaggggtgct gcgccccgct cggcgctccga
 120
 gcttcgggcc gggctgtgcc ccgcgcggtc ttgcgcggga tgaagcgccc ctgcgaggag
 180
 acgacctccg agagcgacat ggacgagacc atcgacgtgg ggagcgagaa caattactcg
 240
 gggcaaagta ctagctctgt gattagattg aattctccaa caacaacatc tcagattatg
 300
 gcaagaaaga aaaggagagg gattatagag aaaaggcgtc gggatcggat aaataacagt
 360
 ttatctgagt tgagaagact tgtgccaaact gcttttgaaa aacaaggatc tgcaaagtta
 420
 gaaaaagctg aaatattgca aatgacagtg gatcatttga agatgcttca ggcaacaggg
 480
 ggtaaaaggct actttgacgc acacgctctt gccatggact tcatgagcat aggattccga
 540
 gagtgcctaa cagaagttgc gcggtacctg agctccgtgg aaggcctgga ctccctggat
 600
 ccgctgcggg tgccgcttgt gtctcatctc agcacttgcg ccaccagcg ggaggcggcg
 660
 gccatgacat cctccatggc ccaccacnca tcatcgcgtc caccgcgcat actgggcccg
 720

ttgtggtttt gtttttttcg atttcgttta atgacaaaat aatctcttaa tatgctgaaa
 2400
 tcaagcacgt gagagttttt gtttaaaaga taagagacac agcatgtatt atgcacttca
 2460
 tttctetact gtgtggagaa agcaataaac attatgagaa tgtaaaccgt tatgcaaaaat
 2520
 tatactttta aatatttgtt ttgaaattac tgtacctagt cttttttgca ttactttgta
 2580
 acctttttct atgcaagagt ctttacatac cactaattaa atgaagtcct ttttgactat
 2640
 t
 2641

<210> 3694

<211> 390

<212> PRT

<213> Homo sapiens

<400> 3694

Arg Pro Arg Arg Arg Glu Arg Ala Ala Arg Ala Asp Arg Ala Ala Ala
 1 5 10 15
 Gly Ala Ala Pro Ala Gln Ala Arg Gly Gly Arg Arg Arg Ala Ser Gly
 20 25 30
 Cys Cys Ala Pro Leu Gly Val Arg Ala Ser Gly Arg Ala Val Pro Arg
 35 40 45
 Ala Val Phe Ala Gly Met Lys Arg Pro Cys Glu Glu Thr Thr Ser Glu
 50 55 60
 Ser Asp Met Asp Glu Thr Ile Asp Val Gly Ser Glu Asn Asn Tyr Ser
 65 70 75 80
 Gly Gln Ser Thr Ser Ser Val Ile Arg Leu Asn Ser Pro Thr Thr Thr
 85 90 95
 Ser Gln Ile Met Ala Arg Lys Lys Arg Arg Gly Ile Ile Glu Lys Arg
 100 105 110
 Arg Arg Asp Arg Ile Asn Asn Ser Leu Ser Glu Leu Arg Arg Leu Val
 115 120 125
 Pro Thr Ala Phe Glu Lys Gln Gly Ser Ala Lys Leu Glu Lys Ala Glu
 130 135 140
 Ile Leu Gln Met Thr Val Asp His Leu Lys Met Leu Gln Ala Thr Gly
 145 150 155 160
 Gly Lys Gly Tyr Phe Asp Ala His Ala Leu Ala Met Asp Phe Met Ser
 165 170 175
 Ile Gly Phe Arg Glu Cys Leu Thr Glu Val Ala Arg Tyr Leu Ser Ser
 180 185 190
 Val Glu Gly Leu Asp Ser Ser Asp Pro Leu Arg Val Arg Leu Val Ser
 195 200 205
 His Leu Ser Thr Cys Ala Thr Gln Arg Glu Ala Ala Ala Met Thr Ser
 210 215 220
 Ser Met Ala His His Xaa Ser Ser Ala Pro Pro Ala Ser Leu Gly Arg
 225 230 235 240
 Arg Leu Pro Pro Pro Ala Arg Ser Pro Ala Pro Ala Gln Arg Pro Pro
 245 250 255
 Cys Leu Arg Val Asn Pro Leu Ser Pro Leu His Asn Phe Arg Ser Ala
 260 265 270
 Ser Ala His Gly Ser Ala Leu Leu Thr Ala Thr Phe Ala His Ala Asp

275	280	285
Ser Ala Leu Arg Met Pro Ser Thr Gly Ser Val Ala Pro Cys Val Pro		
290	295	300
Pro Leu Ser Thr Ser Leu Leu Ser Leu Ser Ala Thr Val His Ala Ala		
305	310	315
Ala Ala Ala Ala Thr Ala Ala Ala His Ser Phe Pro Leu Ser Phe Ala		
	325	330
Gly Ala Phe Pro Met Leu Pro Pro Asn Ala Ala Ala Val Ala Ala		
	340	345
Ala Thr Ala Ile Ser Pro Pro Leu Ser Val Ser Ala Thr Ser Ser Pro		
	355	360
Gln Gln Thr Ser Ser Gly Thr Asn Asn Lys Pro Tyr Arg Pro Trp Gly		
	370	375
Thr Glu Val Gly Ala Phe		380
385	390	

<210> 3695

<211> 1615

<212> DNA

<213> Homo sapiens

<400> 3695

```

nggaaaagta gcctaaagtc agtataacta aagggtggaa cgaggtggga caaggtccgg
60
aattgctgct cagtgatgtg tgtgtgacct ccgctgggtg agctgagact gtcattctca
120
gaaggatggg gatgcttgat ttcttgccca ggttgtccca gcacagtggg gattggccct
180
gttgatgac gaagacagca catggtggca gagatagata ctaacccatg gactttccaa
240
gggaggggaat aggtcttttg aggtatgca agacaaaggt agacactgga taaagaaccc
300
ggtagtggcc aggtattacc ccattctgggc cattactccc acactcagga accagacgtt
360
gtgggtgagg acatgctgtc cctctgcca agtaataact tccttccag ccaggatcct
420
gccccaaagta ggaatatagc tctgcattta cagcagctcc tgctcagacc ttgtcaaac
480
caccctgcag cttaggatta aggagcatgg tcacaggaag gtgggggttc agggcatccc
540
ctcaggaact gccatctccc ccagaattcc aaaatgaagg tccatattgt tgtaggtgtg
600
ctgggtcatgg tgggcttcac agtaggaaag ggtaagtggg gccaggggc agggaggag
660
gaaggggtaa ctgagtcag gaagggggtg gagcgtggcc atggataatc gggcttccca
720
ctggcccagg gtatttgaga gtgacccagt gcctccatcc ctcttctgc ctcccagtt
780
cctgttccc acatccggac gtgccacttc tgctcgtag aagacccttc tgtaggatgc
840
atttcaggct cagagaagtg taccatcagc agctcatccc tgtgcatggt gatcaccatc
900
tattatgatg tcaagggtcg cttcatcggt cgaggtgtg gacagtacat ttctaccgc
960

```

tgccaagaaa aacgcaacac ctactttgca gagtactggg atcaggccca gtgtgtcag
 1020
 tacgattatt gcaactcctg gtcaagcccc caactccaga gctctctgcc ggagcccat
 1080
 gacaggcccc tggccctgcc tctgtctgac tcccagattc agtgggttcta ccaggccctg
 1140
 aacctctccc tgcccctccc caatttccat gctgggacgg agcctgatgg cctggacccc
 1200
 atggtcacac tgtccctgaa cctgggcttg tcttttgctg agctgcgccg catgtacttg
 1260
 ttcttcaata gttcaggact tttgggttctt ccccaggctg gactcttgac acctcaccct
 1320
 tcttgaattc cacagtgcaa atatctttct gtaacaccct cagcatcctg cactgcctc
 1380
 tctgaaaaca cccacattct ttgggtcactg tgatttctta ggcctccgtc tgttgtagga
 1440
 cttagcateta tatgactttt gtgtaatttt ctctcttgaa ctcgaggaggc tgagacggga
 1500
 gaatcgcttg aaccggggag gcggagggtg cagtgcgccg agatcgcgcc actgcactcc
 1560
 agcctgggtg acacagtgcg actccgtctc caaaaaaag gatgaggaat agaat
 1615

<210> 3696

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3696

Met	Val	Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg
1				5					10					15	
Gly	Cys	Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr
			20					25					30		
Tyr	Phe	Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr
		35					40					45			
Cys	Asn	Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro
		50				55				60					
His	Asp	Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp
65				70					75					80	
Phe	Tyr	Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala
		85						90				95			
Gly	Thr	Glu	Pro	Asp	Gly	Leu	Asp	Pro	Met	Val	Thr	Leu	Ser	Leu	Asn
		100				105						110			
Leu	Gly	Leu	Ser	Phe	Ala	Glu	Leu	Arg	Arg	Met	Tyr	Leu	Phe	Leu	Asn
		115				120						125			
Ser	Ser	Gly	Leu	Leu	Val	Leu	Pro	Gln	Ala	Gly	Leu	Leu	Thr	Pro	His
		130				135						140			
Pro	Ser														
145															

<210> 3697

<211> 550

<212> DNA

<213> Homo sapiens

<400> 3697

ncggccgccc agttcgacgg gaggtggccc aggcaaatag tgcacatgat tggcctatgt
 60
 cgttatgggtg ggaggattga ctgctgctgg ggtggggctc gccagtcttg gggacagtgt
 120
 cagcctgtgt gcccaaccacg atgcaaacaat ggtgagtgtg tcggggccaaa caagtgaag
 180
 tgtcatcctg gttatgctgg aaaaacctgt aatcaagatc taaatgagtg tggcctgaag
 240
 ccccgccct gtaagcacag gtgcatgaac acttacggca gctacaagtg ctactgtctc
 300
 aacggatata tgctcatgcc ggatgggtcc tgctcaagtg ccctgacctg ctccatggca
 360
 aactgtcagt atggctgtga tgttggttaa ggacaaatac ggtgccagt cccatcccct
 420
 ggctgcagc tggtcctga tgggaggacc tgtgtagatg ttgatgaatg tgctacagga
 480
 agagcctcct gccctaaatt taggcaatgt gtcaacactt ttgggagcta catctgcaag
 540
 tgtcataaag
 550

<210> 3698

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3698

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser
1			5					10					15		
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp
		20					25					30			
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Val	Cys	Gln	Pro	Arg	Cys
		35				40					45				
Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro	Gly
	50					55				60					
Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Asp	Leu	Asn	Glu	Cys	Gly	Leu	Lys
65				70				75				80			
Pro	Arg	Pro	Cys	Lys	His	Arg	Cys	Met	Asn	Thr	Tyr	Gly	Ser	Tyr	Lys
			85					90				95			
Cys	Tyr	Cys	Leu	Asn	Gly	Tyr	Met	Leu	Met	Pro	Asp	Gly	Ser	Cys	Ser
		100					105					110			
Ser	Ala	Leu	Thr	Cys	Ser	Met	Ala	Asn	Cys	Gln	Tyr	Gly	Cys	Asp	Val
		115				120						125			
Val	Lys	Gly	Gln	Ile	Arg	Cys	Gln	Cys	Pro	Ser	Pro	Gly	Leu	Gln	Leu
	130					135					140				
Ala	Pro	Asp	Gly	Arg	Thr	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Gly
145				150				155					160		
Arg	Ala	Ser	Cys	Pro	Lys	Phe	Arg	Gln	Cys	Val	Asn	Thr	Phe	Gly	Ser
			165					170					175		
Tyr	Ile	Cys	Lys	Cys	His	Lys									
			180												

<210> 3699
 <211> 510
 <212> DNA
 <213> Homo sapiens

<400> 3699
 naggagagag attgagaact atgagagaca gcagctaaga gacaaaggag gcgggagact
 60
 gcctaggtgc cgcagacccc acaccgtcct cttgcccccc cgccactggg accccagagc
 120
 tggcccttga tggaggggag ccgacctcgc agcagcctga gcctggccag cagcgcctcc
 180
 accatctcct cgctcagcag cctgagcccc aagaagccca cccgggcagt aaacaaggtc
 240
 cagccttttg ggaagagagg caatgcgctc aggagggatc ccaaccttcc cgtgcacatc
 300
 cgaggctggc ttcataagca ggacagctcg gggctccgct tctggaaacg ccgctgggtc
 360
 gtcctctccg gccattgcct cttttattac aaggacagcc gcgaggagag tgtcctaggc
 420
 agcgtcctgc tccccagcta caatattaga ccagatgggc cgggagcccc ccgagggcgg
 480
 cgcttcacct tcaccgcaga gcacccgggt
 510

<210> 3700
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 3700
 Met Glu Gly Ser Arg Pro Arg Ser Ser Leu Ser Leu Ala Ser Ser Ala
 1 5 10 15
 Ser Thr Ile Ser Ser Leu Ser Ser Leu Ser Pro Lys Lys Pro Thr Arg
 20 25 30
 Ala Val Asn Lys Val His Ala Phe Gly Lys Arg Gly Asn Ala Leu Arg
 35 40 45
 Arg Asp Pro Asn Leu Pro Val His Ile Arg Gly Trp Leu His Lys Gln
 50 55 60
 Asp Ser Ser Gly Leu Arg Leu Trp Lys Arg Arg Trp Phe Val Leu Ser
 65 70 75 80
 Gly His Cys Leu Phe Tyr Tyr Lys Asp Ser Arg Glu Glu Ser Val Leu
 85 90 95
 Gly Ser Val Leu Leu Pro Ser Tyr Asn Ile Arg Pro Asp Gly Pro Gly
 100 105 110
 Ala Pro Arg Gly Arg Arg Phe Thr Phe Thr Ala Glu His Pro Gly
 115 120 125

<210> 3701
 <211> 733
 <212> DNA
 <213> Homo sapiens

<400> 3701

ntgaattttc aaattacatt ctaggtttgc agcctctgga gcgtccagcg tcacattatt
 60
 attcactcag gagaaaaacc acacttgtgt gacatctgtg gtcgaggggt tagtaacttc
 120
 agtaatttga aggagcacia aaagacacac acggctgata aagtcttcac ctgtgatgag
 180
 tgtggaaagt cttttaatat gcaaaggaag ttagtaaagc acagaattcg gcacacgggg
 240
 gagcggcctt acagctgctc tgcctgcggg aaatgttttg ggggatcagg tgacctccgc
 300
 aggcattgtc gcactcacac tggggagaag ccgtacacat gtgagatctg taacaagtgc
 360
 tttaccgct ctgcggtgct ccggcggcac aagaagatgc actgcaaagc tggtgacgag
 420
 agccagatg tgctggagga gctcagccaa gccatcgaga cctccgacct cgagaaatct
 480
 cagagctcag actctttctc ccaagacacg tctgtgacgc tgatgccagt gtcgggttaa
 540
 ctccctgtcc acccagtgga aaattctgtg gcagaatttg atagccactc tggcggctcc
 600
 tattgtaagt tacggtccat gatccaacct catggagtta gtgaccagga gaagctgagt
 660
 ttggatcctg gtaaaacttg caagccccag attcatcata cacagcctca tgcctattct
 720
 tactctgatt ttg
 733

<210> 3702

<211> 236

<212> PRT

<213> Homo sapiens

<400> 3702

Val	Cys	Ser	Leu	Trp	Ser	Val	Gln	Arg	His	Ile	Ile	Ile	His	Ser	Gly
1				5					10					15	
Glu	Lys	Pro	His	Leu	Cys	Asp	Ile	Cys	Gly	Arg	Gly	Phe	Ser	Asn	Phe
			20					25					30		
Ser	Asn	Leu	Lys	Glu	His	Lys	Lys	Thr	His	Thr	Ala	Asp	Lys	Val	Phe
		35					40					45			
Thr	Cys	Asp	Glu	Cys	Gly	Lys	Ser	Phe	Asn	Met	Gln	Arg	Lys	Leu	Val
	50					55					60				
Lys	His	Arg	Ile	Arg	His	Thr	Gly	Glu	Arg	Pro	Tyr	Ser	Cys	Ser	Ala
65					70					75				80	
Cys	Gly	Lys	Cys	Phe	Gly	Gly	Ser	Gly	Asp	Leu	Arg	Arg	His	Val	Arg
			85						90				95		
Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Thr	Cys	Glu	Ile	Cys	Asn	Lys	Cys
			100					105					110		
Phe	Thr	Arg	Ser	Ala	Val	Leu	Arg	Arg	His	Lys	Lys	Met	His	Cys	Lys
	115					120						125			
Ala	Gly	Asp	Glu	Ser	Pro	Asp	Val	Leu	Glu	Glu	Leu	Ser	Gln	Ala	Ile
	130					135					140				
Glu	Thr	Ser	Asp	Leu	Glu	Lys	Ser	Gln	Ser	Ser	Asp	Ser	Phe	Ser	Gln
145					150					155				160	
Asp	Thr	Ser	Val	Thr	Leu	Met	Pro	Val	Ser	Val	Lys	Leu	Pro	Val	His

[illegible]

<210> 3703

<211> 3294

<212> DNA

<213> Homo sapiens

<400> 3703

60	nnccggccgcgc	gcgtccggct	gctggaccga	acttctgcgc	tgcggacagc	aggagcagcg
120	ccgagcccca	ttccccacc	tctccagctc	gccctctgag	cctccccagc	cctctctcca
180	tttcccacaa	ttgtgctgca	catgggtgatg	agtttccggg	tgtctgagct	ccagggtgctt
240	cttggtcttg	ctggccggaa	caagagtggga	cggaagcacg	agctcctggc	caaggctctg
300	caacctctga	agtccagctg	tgcccctagt	gtccagatga	agatcaaaga	gctttaccga
360	cgacgctttc	cccggaagac	cctggggccc	tctgatctct	cccttctctc	tttgccccct
420	ggcacctctc	ctgtaggctc	ccctggtcct	ctagctccca	ttcccccaac	gctgttgggc
480	cctggcaccc	tgttggggcc	caagcgtgag	gtggacatgc	acccccctct	gccccagcct
540	gtgcaccctg	atgtcaccat	gaaaccattg	cccttctatg	aagtctatgg	ggagctcatc
600	cgggcccacca	cccttgcatc	cacttctagc	cagcggtttg	aggaagcgca	ctttaccttt
660	gccccacac	cccagcaagt	gcagcagatt	cttacatcca	gagaggttct	gccaggagcc
720	aaatgtgatt	ataccataca	ggtgcagcta	aggttctgtc	tctgtgagac	cagctgcccc
780	caggaagatt	attttcccc	caacctcttt	gtcaaggta	atgggaaact	gtgccccctg
840	ccgggttacc	ttcccccaac	caagaatggg	gccgagccca	agaggccccag	ccgccccatc
900	aacatcacac	ccctggctcg	actctcagcc	actgttccca	acaccattgt	ggtcaattgg
960	tcatctgagt	tcggacggaa	ttactccttg	tctgtgtacc	tggtgaggca	gttgactgca
1020	ggaacccttc	tacaaaaact	cagagcaaag	ggtatccgga	acccagacca	ctcgcgggca
1080	ctgatcaagg	agaaattgac	tgctgaccct	gacagtgagg	tggccactac	aagtctccgg
1140	gtgtcactca	tgtgcccgc	aggggaagatg	cgctgactg	tcccttgteg	tgccctcacc

tgcgccacc tgcagagctt cgatgctgcc ctttatctac agatgaatga gaagaagcct
1200
acatggacat gtccctgtgtg tgacaagaag gctccctatg aatctcttat cattgatggt
1260
ttatttatgg agattcttag ttccctgttca gattgtgatg agatccaatt catggaagat
1320
ggatcctggt gcccaatgaa acccaagaag gaggcctctg aggtttgccc cccgccaggg
1380
tatgggctgg atggcctcca gtacagccca gtccaggggg gagatccatc agagaataag
1440
aagaaggctg aagttattga cttgacaata gaaagctcat cagatgagga ggatctgccc
1500
cctaccaaga agcactgttc tgtcacctca gctgccatcc cggccctacc tggaagcaaa
1560
ggagtctga catctggcca ccagccatcc tcggtgctaa ggagccctgc tatgggcacg
1620
ttgggtgggg atttctgtc cagtctccca ctacatgagt acccacctgc ctccccactg
1680
ggagccgaca tccaaggttt agatttattt tcatttcttc agacagagag tcagcactat
1740
ggccctctg tcatcacctc actagatgaa caggatgcc ttggccactt ctccagtac
1800
cgagggaccc cttctcactt tctgggcca ctggcccca cgctggggag ctccactgc
1860
agcgccactc cggcgccccc tcctggccgt gtcagcagca ttgtggcccc tgggggggcc
1920
ttgaggagg ggcatggagg acccctgccc tcaggctcct ctttgactgg ctgtcggta
1980
gacatcattt ccctggactg agttccctgg attatggaaa cttegtgtc ccccaact
2040
gagcaagtat gctgtggagt cccaacccca gctactctga tccctctggg ggctctggcc
2100
aagggccaga cagaccttca cagatgccta cttttggcct catctctgcc tgacaaggcc
2160
agcaccctaa gggtaatat ttaacctctt .tttaaggaca ctgggggtctg tttctggaaa
2220
tgttctttag atggtggcac attcctttgg gtatgttaac ctaggcagtg ggaggcaaat
2280
gggatgggat gtgagctagg agaagggtg aacctcagc cttgactatg tctagagcct
2340
cttggggaag gggcacctct cttgaacccc aaatgctctc tcttcttatt acccaaccc
2400
atggctctat ttcttcttca catccattgt ctcttcattg ctattccatt ccttctggcc
2460
aaacagacag gtggaaaaac tgagacaggc agtttcagag atggacagag aactttattt
2520
tggattgtgg atgtggactt tttgtacat aaataagaaa aacaaaaata ctccaaagat
2580
gacttccct gctcctact ccagtatgac agaggaggat gtaaggcctt agccatgac
2640
tgcaggggtc tgggagtcag gcccgcccta ttgcttgggt ctctctctat ttatatctt
2700
aagttcacag tgttcttctat tccccctaa gcttctagag gctcatggcc ctgtagttag
2760

gcctggctca ttctgcacct ttccaggag gtggaaggac cctgtgccct ccttcccaat
 2820
 cttctttttc aggtctgcca aggcctagga cctatgttgt aattttactt tttatttcta
 2880
 aagttgtagt gaagctctca ccataataa aggttgtaa tgttctgtga gtgtcatgga
 2940
 gatgggctag ggaggggatt ttacacttca ctttccagac ccctggtttg ggggaagagg
 3000
 gtccatgttc cattcttcct ttgctggccc tgggtccagg taagctgcac ttttacacgg
 3060
 tgggggtgtt ctgcccagat gttgcagcca gagcttgagg gcaaacttgg ttccagtgtt
 3120
 gactctctct ttgtcctctg ccattgggttg gatcatccgc aggaggggtg acatgtgcag
 3180
 gaccagaggt cgggctcttc cctcctctc tagttccact gcaaggacag agggtggtag
 3240
 gtcttggggg agaagtcagg gtgtctctgt cccatcctct ggggcagcca ctgc
 3294

<210> 3704

<211> 619

<212> PRT

<213> Homo sapiens

<400> 3704

Met	Val	Met	Ser	Phe	Arg	Val	Ser	Glu	Leu	Gln	Val	Leu	Leu	Gly	Phe
1				5				10						15	
Ala	Gly	Arg	Asn	Lys	Ser	Gly	Arg	Lys	His	Glu	Leu	Leu	Ala	Lys	Ala
			20					25					30		
Leu	His	Leu	Leu	Lys	Ser	Ser	Cys	Ala	Pro	Ser	Val	Gln	Met	Lys	Ile
		35					40					45			
Lys	Glu	Leu	Tyr	Arg	Arg	Arg	Phe	Pro	Arg	Lys	Thr	Leu	Gly	Pro	Ser
	50					55					60				
Asp	Leu	Ser	Leu	Leu	Ser	Leu	Pro	Pro	Gly	Thr	Ser	Pro	Val	Gly	Ser
					70					75				80	
Pro	Gly	Pro	Leu	Ala	Pro	Ile	Pro	Pro	Thr	Leu	Leu	Ala	Pro	Gly	Thr
				85					90					95	
Leu	Leu	Gly	Pro	Lys	Arg	Glu	Val	Asp	Met	His	Pro	Pro	Leu	Pro	Gln
			100					105					110		
Pro	Val	His	Pro	Asp	Val	Thr	Met	Lys	Pro	Leu	Pro	Phe	Tyr	Glu	Val
		115					120					125			
Tyr	Gly	Glu	Leu	Ile	Arg	Pro	Thr	Thr	Leu	Ala	Ser	Thr	Ser	Ser	Gln
			130			135					140				
Arg	Phe	Glu	Glu	Ala	His	Phe	Thr	Phe	Ala	Leu	Thr	Pro	Gln	Gln	Val
				145		150				155				160	
Gln	Gln	Ile	Leu	Thr	Ser	Arg	Glu	Val	Leu	Pro	Gly	Ala	Lys	Cys	Asp
				165					170					175	
Tyr	Thr	Ile	Gln	Val	Gln	Leu	Arg	Phe	Cys	Leu	Cys	Glu	Thr	Ser	Cys
			180					185				190			
Pro	Gln	Glu	Asp	Tyr	Phe	Pro	Pro	Asn	Leu	Phe	Val	Lys	Val	Asn	Gly
		195						200				205			
Lys	Leu	Cys	Pro	Leu	Pro	Gly	Tyr	Leu	Pro	Pro	Thr	Lys	Asn	Gly	Ala
		210				215					220				
Glu	Pro	Lys	Arg	Pro	Ser	Arg	Pro	Ile	Asn	Ile	Thr	Pro	Leu	Ala	Arg

```

225          230          235          240
Leu Ser Ala Thr Val Pro Asn Thr Ile Val Val Asn Trp Ser Ser Glu
          245          250          255
Phe Gly Arg Asn Tyr Ser Leu Ser Val Tyr Leu Val Arg Gln Leu Thr
          260          265          270
Ala Gly Thr Leu Leu Gln Lys Leu Arg Ala Lys Gly Ile Arg Asn Pro
          275          280          285
Asp His Ser Arg Ala Leu Ile Lys Glu Lys Leu Thr Ala Asp Pro Asp
          290          295          300
Ser Glu Val Ala Thr Thr Ser Leu Arg Val Ser Leu Met Cys Pro Leu
305          310          315          320
Gly Lys Met Arg Leu Thr Val Pro Cys Arg Ala Leu Thr Cys Ala His
          325          330          335
Leu Gln Ser Phe Asp Ala Ala Leu Tyr Leu Gln Met Asn Glu Lys Lys
          340          345          350
Pro Thr Trp Thr Cys Pro Val Cys Asp Lys Lys Ala Pro Tyr Glu Ser
          355          360          365
Leu Ile Ile Asp Gly Leu Phe Met Glu Ile Leu Ser Ser Cys Ser Asp
          370          375          380
Cys Asp Glu Ile Gln Phe Met Glu Asp Gly Ser Trp Cys Pro Met Lys
385          390          395          400
Pro Lys Lys Glu Ala Ser Glu Val Cys Pro Pro Gly Tyr Gly Leu
          405          410          415
Asp Gly Leu Gln Tyr Ser Pro Val Gln Gly Gly Asp Pro Ser Glu Asn
          420          425          430
Lys Lys Lys Val Glu Val Ile Asp Leu Thr Ile Glu Ser Ser Ser Asp
          435          440          445
Glu Glu Asp Leu Pro Pro Thr Lys Lys His Cys Ser Val Thr Ser Ala
          450          455          460
Ala Ile Pro Ala Leu Pro Gly Ser Lys Gly Val Leu Thr Ser Gly His
465          470          475          480
Gln Pro Ser Ser Val Leu Arg Ser Pro Ala Met Gly Thr Leu Gly Gly
          485          490          495
Asp Phe Leu Ser Ser Leu Pro Leu His Glu Tyr Pro Pro Ala Phe Pro
          500          505          510
Leu Gly Ala Asp Ile Gln Gly Leu Asp Leu Phe Ser Phe Leu Gln Thr
          515          520          525
Glu Ser Gln His Tyr Gly Pro Ser Val Ile Thr Ser Leu Asp Glu Gln
          530          535          540
Asp Ala Leu Gly His Phe Phe Gln Tyr Arg Gly Thr Pro Ser His Phe
545          550          555          560
Leu Gly Pro Leu Ala Pro Thr Leu Gly Ser Ser His Cys Ser Ala Thr
          565          570          575
Pro Ala Pro Pro Gly Arg Val Ser Ser Ile Val Ala Pro Gly Gly
          580          585          590
Ala Leu Arg Glu Gly His Gly Gly Pro Leu Pro Ser Gly Pro Ser Leu
          595          600          605
Thr Gly Cys Arg Ser Asp Ile Ile Ser Leu Asp
          610          615

```

<210> 3705

<211> 1737

<212> DNA

<213> Homo sapiens

<400> 3705

ttttggaggg aaaggatgca ctttcatggt taacaaaata aattaaatat acggggcttc
60
agctcaaact ctacataaaa ttacagagat ctggggccac cagcacagtg ggggtggggg
120
tgggtgtctgg cctggacggg gtgtgggtcat cagcatggct gaaagaccag gcgggtcccg
180
ggccccagga gagaccacag tccctgcaac ccagtcttcc ttccatcatt attaataatta
240
tcttcatttc ttaaataata ataccaaggc cccttctctg tgtcaggggg agaatgcagt
300
gggggatgagc cactagccat ggggtccagc ctctcaggct tggggctgct gtgccccaa
360
ccccagccca cagcagtagg ggactcctgg gcacccaagg caggtggcaa aaatagccgc
420
caaggccagg ggacagaggc ggggatggag gcggggactg aggcggggac agaggcgggc
480
agagttgggg gagtgacggg ggagcaggga aagtcctca tcaactatga gcctcacggc
540
acacgtactg caggcttcac ggcacacct cccaaaagca cgtcagtctg cgtgtgtnc
600
aggcagcata tctgcacctg tgtgtgcatg tgtgtccgga agtgtgtgcc caggcagcat
660
atctgcatgt gtgcgtgctg gtgtatccgg acagcaatct gcacgtgtgt gcatgtccag
720
acagcatatc tgtgcacatg tgtgtgtcca ggcaatatct gcacgtgtgt gagtgttgag
780
gcagcattat ctgtgtgtgt gtccaggagc atatctgctg gcgtgtgtgt gtccnggaca
840
gcatatctgt gcatgcgtgt gtgtgtccgg acagcagtct gcgtgtgtgt gtgactagac
900
agcatatctg cgtgtgtcca ggcagcatat ctgcgcctgt gcacgtgtgt ctggaagtgt
960
gtgtccggca gcatatctgc atgtgtgtgc gtgtccnaga cagcatatct gtgcacgcgt
1020
gtgtgtgtgt gtgtccaggc anatatccgt gcatgtgtgt gtcaaggcag cattatctgt
1080
gtgtccagga gcatatctgt gcacgtgtgt gtccggatac atatctgcac gtgtgtggtc
1140
cagacagcat atccgtgtgt gtgtgtgtgt nccaggcagc acatctgcgc atgggtgtgc
1200
gtgnntgtat gttcaggcag catgtccttg tatgttctgg catgtctctg tgcgtgtgcg
1260
tgcatttggg cagcttatct gtgtgcccag gcggcatatc tgtgcatgtg cgtgtgtgcg
1320
tacgtgtgcc ttncaggag cagctgtgcg cgcagtgtgt tgcatatg catccaggta
1380
tgtgtgtgtc tgtgtgtgtg tgtccagggg ctatgcctca cacacagact gcctggggtg
1440
ctggccatc ctcctcgcca tgggtccct gccttcgtct gcagctccgt cctccatct
1500
cccagtctgc ctgtctggcc ggcccccccg tgcccactgc agatacgggt ccgtctagca
1560

ctgatagtgg atgtgctggg ggaccttgcc ctcacgtgt gagtgtgtgt gagagtgtgt
 1620
 gtgtgtgtgt gtgtgtggat gtctgtgtag agtttggggg acaacttagg gccagcaact
 1680
 gggcctgggc ccaataagtg ctgggggggc tgccggagac ccatgctcct cacacag
 1737

<210> 3706

<211> 191

<212> PRT

<213> Homo sapiens

<400> 3706

Met	Gly	Ser	Ser	Leu	Ser	Gly	Leu	Gly	Leu	Leu	Cys	Pro	Gln	Pro	Gln
1				5					10					15	
Pro	Thr	Ala	Val	Gly	Asp	Ser	Trp	Ala	Pro	Lys	Ala	Gly	Gly	Lys	Asn
			20					25					30		
Ser	Arg	Gln	Gly	Gln	Gly	Thr	Glu	Ala	Gly	Met	Glu	Ala	Gly	Thr	Glu
		35					40					45			
Ala	Gly	Thr	Glu	Ala	Gly	Arg	Val	Gly	Gly	Val	Thr	Val	Glu	Gln	Gly
	50					55					60				
Lys	Ser	Leu	Ile	Asn	Tyr	Glu	Pro	His	Gly	Thr	Arg	Thr	Ala	Gly	Phe
65				70					75					80	
Thr	Ala	His	Pro	Pro	Lys	Ser	Thr	Ser	Val	Cys	Val	Cys	Xaa	Arg	Gln
			85					90						95	
His	Ile	Cys	Thr	Cys	Val	Cys	Met	Cys	Val	Arg	Lys	Cys	Val	Pro	Arg
		100						105					110		
Gln	His	Ile	Cys	Met	Cys	Ala	Cys	Val	Cys	Ile	Arg	Thr	Ala	Ile	Cys
		115					120					125			
Thr	Cys	Val	His	Val	Gln	Thr	Ala	Tyr	Leu	Cys	Thr	Cys	Val	Cys	Pro
	130					135					140				
Gly	Asn	Ile	Cys	Thr	Cys	Val	Ser	Val	Glu	Ala	Ala	Leu	Ser	Val	Cys
145					150					155				160	
Val	Ser	Arg	Ser	Ile	Ser	Ala	Cys	Val	Cys	Val	Ser	Xaa	Thr	Ala	Tyr
			165					170					175		
Leu	Cys	Met	Arg	Val	Cys	Val	Arg	Thr	Ala	Val	Cys	Val	Cys	Val	
		180						185					190		

<210> 3707

<211> 585

<212> DNA

<213> Homo sapiens

<400> 3707

ntctgccaag ggatgatatc tatgtgtcag atgttgagga cgacggtgat gacacatctc
 60
 tggatagtga cctggatcca gaggagctgg caggagtcag gggacatcag ggtctaaggg
 120
 accaaaagcg tatgcgactt actgaagtgc aagatgataa agaggaggtg ggatttcacc
 180
 tggcttcaac atgtgctagc tatcaatgtg atacattata tacaacaaaa ggaaagaaca
 240
 aaaatatggg gcatttcatt ggatgctgaa aatgcatttg ataacattca acttcctac
 300

atgataaaaa cctcaagaa actgggtata gaaggaatgt atctcaacgt aataaaagcc
 360
 gtatatgaca gaccancagt tagtatcatc ctgaatgggg aaaatctaca agaactacaa
 420
 acctttgggt taagatctgg aacacaacaa ggctgcccgc tttcaccaca gttactgaac
 480
 atagtactat aagtcctagc taggcgaatc agaggagaaa taaggggcat gcaaattggg
 540
 aaggaagaag tcaaattgtc cttatttaca gatgataaga tctta
 585

<210> 3708

<211> 106

<212> PRT

<213> Homo sapiens

<400> 3708

Asp	Phe	Thr	Trp	Leu	Gln	His	Val	Leu	Ala	Ile	Asn	Val	Ile	His	Tyr
1				5				10					15		
Ile	Gln	Gln	Lys	Glu	Arg	Thr	Lys	Ile	Trp	Gly	Ile	Ser	Leu	Asp	Ala
			20					25					30		
Glu	Asn	Ala	Phe	Asp	Asn	Ile	Gln	Leu	Pro	Tyr	Met	Ile	Lys	Thr	Leu
		35					40					45			
Lys	Lys	Leu	Gly	Ile	Glu	Gly	Met	Tyr	Leu	Asn	Val	Ile	Lys	Ala	Val
		50				55					60				
Tyr	Asp	Arg	Pro	Xaa	Val	Ser	Ile	Ile	Leu	Asn	Gly	Glu	Asn	Leu	Gln
65					70					75				80	
Glu	Leu	Gln	Thr	Phe	Gly	Leu	Arg	Ser	Gly	Thr	Gln	Gln	Gly	Cys	Pro
			85						90					95	
Leu	Ser	Pro	Gln	Leu	Leu	Asn	Ile	Val	Leu						
			100						105						

<210> 3709

<211> 3768

<212> DNA

<213> Homo sapiens

<400> 3709

nnaccggtcc cctaccccc tccgcctgg ccgccccgc ccgccgtgac ccacggccgc
 60
 ctccggagcc cgacgcgggc atatacttct cttgtcttgg ttggatgcac aaatctgtgt
 120
 gcagtgttt ttgccgttg cctagacgat cacttggttt ctctgaggat gtctggttct
 180
 cgtaaagagt ttgatgtgaa acagattttg aaaatcagat ggagggtggt tggatcatca
 240
 gcatcatctc ctaattctac agttgacagc cagcaggag aattttggaa ccgaggacag
 300
 actggagcaa acggtgggag aaagttttta gatccatgta gcctacaatt gcctttggct
 360
 tcaattggtt accgaaggtc cagccaactg gattttcaga attcaccttc ttggccaatg
 420
 gcatccacct ctgaagtcct tgcatttgag ttacagcag aagattgtgg cgggtgcacat
 480

tggctggata gaccagaagt ggatgatggc actagtgaag aagaaaatga atctgattcc
540
agttcatgca ggacttccaa tagtagtcag acattatcat cctgtcatatc tatggagcca
600
tgtacatcag atgaatTTTT ccaagccctt aatcatgccg agcaaacatt taaaaaaatg
660
gaaaactatt tgagacataa acagttgtgt gatgtaattt tagtcgctgg tgatcgcgaga
720
attccagctc acagattggg gctctcctct gtctcagact attttgctgc catgtttact
780
aatgatgtca gagaagcaag ataagaagac ataaaaatgg aagggtgtaga accaaattca
840
tcgtggctct tgatccaata tgcttataca ggccgccttg aattaaaaga agataatatt
900
gagtgcctgt tatctacagc ttgccttctt cagctttcac aggctgtaga agcatgttgt
960
aagtttttaa tgaaacagct tcattccatcc cagctcttgg gaattctttc ttttgctgat
1020
gcccagggtt gtacagattt gcataaagtg gctcacaatt atactatgga gcatttcatg
1080
gaagtaatca gaaaccagga atttgtatta ttaccagcca gcgaaattgc aaagctcttg
1140
gctagtgatg acatgaacat tctaatgag gagacaatat tgaatgcact tcttacttgg
1200
gtccgtcatg atttggaaca gagacggaaa gatctaagta aacttttggc ttatattagg
1260
ctacctcttc ttgcaccaca gtctctggca gacatggaaa ataatgtact ttttcgggat
1320
gatatagaat gtcagaaact cattatggaa gcaatgaagt accatttatt accagagaga
1380
cgacccatgt taaaaagtc tcggacaaaa cctaggaagt caactgttgg tacattattt
1440
gcagtgtggg gaattggatc aacaaaagga gcaacaagca ttgaaaagta tgatctccgt
1500
acaaatatgt ggactccagt agcaaatatg aatgggagga ggctacagtt cgggtgtgca
1560
gtgctagatg acaaactgta tgtggttggg ggaagagatg gactgaagac tttgaatact
1620
gtagagtgtc acaaccccaa aacaaaaact tggagtgtga tgccacctat gtccacacat
1680
agacatggcc ttggtgtggc tgtactggaa ggtcccatgt atgccgtagg aggacatgat
1740
ggctggagct atctgaacac agtggaaga tgggaccctc aggtcgcca gtggaatttt
1800
gttgccacta tgtctacccc taggagtaca gtaggtgtgg cagtactaag tggaaaactt
1860
tatgcagttg gtggtcgtga tggaaagttct tgtctcaaat cagtagaatg ttttgatcct
1920
catactaata agtggacact gtgtgcacag atgtcaaaaa ggagaggtgg cgtaggagtg
1980
acgacctgga atggactgct gtatgctata ggggggcacg atgctccgc atccaacttg
2040
acttccagac tctcagactg tgtggaaaga tatgatccca aaacagacat gtggactgca
2100

gtagcatcca tgagcatcag cagagatgca gtgggggtct gtttacttgg tgataagtta
2160
tatgctgttg ggggggtatga tggacaggca taccttaata cctgggaggc ttatgatecc
2220
cagacaaatg agtggacceca ggtattttca catacttttg aggacagcaa agatcacctg
2280
gtggccatca agcagaccat ctggaggcaa aactccttat ctgaggaatt cagaagtcac
2340
tagactgccc tattatctaa agccggcatc ttgtactagg cttctttacc aaaaatgtat
2400
ttaataaaac atttccaacc tgtgaaaaaa aaaaaaaaaa attttttttt ttttgcttca
2460
aagagctttt ctgagagcag ggattttatt tcattacatg caacatggac aaacactgtt
2520
ctggttttca tgacaatttg aattcaaagt aatatgtttt tctaaaatc agtgtattta
2580
tttgccata tggatgctcc ttgtgttctt ggtcacatat taaagaaact ggcacttttg
2640
ctgcaagaac aaataaaaaa tatcataaat ccaactggtc ttgtatttgg gtctaggtta
2700
ataactaaag aaccattcag caataatggc ttgaaacatt tatatatcct atgaaaccgc
2760
aattagttaa gaggctgctg attctaataa ctatgacacc agcaaggag tgaggggaga
2820
aatgttaact ctggatgcca aattcagagc aaagtatcta ttatctcctt ctacttttg
2880
cagtatctat aaataaagtg gtggggggag aattatatga ataagttaa ataaaagtgc
2940
atacagaact gagaatatatt ttcattggaat ttgccactta gttcttaaaa ttcttataag
3000
gaaaataacc atttacaaca aaagactagt tacactgttg ctgttttaga catgagagca
3060
aaatgagtaa caatcaaatt ctctggttta aacttaatta tcttaaaaca tgttattctg
3120
taagttgaca tctatgcctt gaaaattcaa ggcagaaagt aaaatcattt agaaagccag
3180
aaattccatc aatacatcta gacagatgtt tgcttgtagt ttttggtatc caaaaccttt
3240
tttccacaca tcgcacagat gccttttttg taggcacagc cctggcagta atgagaacct
3300
ggttggtgca cagaactttt acaaattcta caagtggaga acttattctt tccatatgga
3360
tcaaatcttg ctttttttga agtcaaagct ttattttcat tcagctttct tccaccactt
3420
tctgtggtat tcttagcacc atctttccat gtatctggag tgataacagt accaagtttc
3480
ttttcacatt ttctgcacac catccttccc cagcacacct ttttcttccc gatctgaacc
3540
cctgttgact aatcttgect gggtttgtgt aggtctgcag gaaggaaggc tgaaaaagcg
3600
gacgaagatt ttgacttaag tgggactttg tgatttaatt ttttcttttt ttttaagtggg
3660
gaggaagggg aagctagatg gactaggaga gacttgattt tggtgctaaa gttccccagt
3720

tcatatgtga catcttttta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
3768

<210> 3710
<211> 70
<212> PRT
<213> Homo sapiens

<400> 3710
Met Glu Pro Cys Thr Ser Asp Glu Phe Phe Gln Ala Leu Asn His Ala
1 5 10 15
Glu Gln Thr Phe Lys Lys Met Glu Asn Tyr Leu Arg His Lys Gln Leu
20 25 30
Cys Asp Val Ile Leu Val Ala Gly Asp Arg Arg Ile Pro Ala His Arg
35 40 45
Leu Val Leu Ser Ser Val Ser Asp Tyr Phe Ala Ala Met Phe Thr Asn
50 55 60
Asp Val Arg Glu Ala Arg
65 70

<210> 3711
<211> 1366
<212> DNA
<213> Homo sapiens

<400> 3711
nctcactttt ctgacacgca ggcgatcggg cttgtggaga accagagtga ctggtacctg
60
ggcaacctct ggaagaacca caggccctgg cctgccttgg gccggggatt taacacaggt
120
gtgatectgc tgcggctgga ccggctccgg caggctggct gggagcagat gtggaggctg
180
acagccaggc gggagctcct tagcctgcct gccgcctcac tggctgacca ggacatcttc
240
aacgctgtga tcaaggagca cccggggcta gtgcagcgtc tgccttgtgt ctggaatgtg
300
cagctgtcag atcacacact ggccgagcgc tgcctactctg aggcgtctga cctcaaggtg
360
atccactgga actcaccaaa gaagcttcgg gtgaagaaca agcatgtgga attcttccgc
420
aatttctacc tgaccttctt ggagtagcat gggaacctgc tgcggagaga gctctttgtg
480
tgccccagcc agccccacc tgggtgctgag cagttgcagc aggccctggc acaactggac
540
gaggaagacc cctgctttga gttccggcag cagcagctca ctgtgcaccg tgtgcatgtc
600
actttctgc cccatgaacc gccaccccc cggcctcacg atgtcaccct tgtggcccag
660
ctgtccatgg accggctgca gatgttgaa gccctgtgca ggcactggcc tggccccatg
720
agcctggcct tgtacctgac agacgcggaa gctcagcagt tcctgcattt cgtcgaggcc
780
tcaccagtgc ttgctgcccc gcaggacgtg gcctaccatg tgggtgtaccg tgagggggccc
840

ctataccccc tcaaccagct tcgcaacgtg gccttgcccc aggccctcac gccttacgtc
 900
 ttcttcagtg acattgactt cctgcctgcc tattctctct acgactacct cagggcctcc
 960
 attgagcagc tggggctggg cagccggcgc aaggcagcac tgggtgtgcc ggcatttgag
 1020
 accctgcgct accgcttcag cttcccccat tccaaggtgg agctgttgcc cttgctggat
 1080
 gcgggcactc tctacacctt caggtaggag aggtacttct tctgccact ccactcatt
 1140
 gcccacactg gccccacta cccacgagct cctagcctca gcctggctcc caccgaccc
 1200
 tgctgcacag gtaccacgat gccccgaggc cagcaccca cagactatgc ccgtggcgg
 1260
 gagctcaggc ccgctaccgt gtgcaatggg cggccaacta tgaaccctac gtggtggtgc
 1320
 cagcagactg tccccgetat gatcctcgct ttgtgggctt cggtcg
 1366

<210> 3712

<211> 368

<212> PRT

<213> Homo sapiens

<400> 3712

Xaa	His	Phe	Ser	Asp	Thr	Gln	Ala	Ile	Gly	Leu	Val	Glu	Asn	Gln	Ser
1				5					10					15	
Asp	Trp	Tyr	Leu	Gly	Asn	Leu	Trp	Lys	Asn	His	Arg	Pro	Trp	Pro	Ala
			20					25					30		
Leu	Gly	Arg	Gly	Phe	Asn	Thr	Gly	Val	Ile	Leu	Leu	Arg	Leu	Asp	Arg
			35				40						45		
Leu	Arg	Gln	Ala	Gly	Trp	Glu	Gln	Met	Trp	Arg	Leu	Thr	Ala	Arg	Arg
			50				55				60				
Glu	Leu	Leu	Ser	Leu	Pro	Ala	Ala	Ser	Leu	Ala	Asp	Gln	Asp	Ile	Phe
65					70					75					80
Asn	Ala	Val	Ile	Lys	Glu	His	Pro	Gly	Leu	Val	Gln	Arg	Leu	Pro	Cys
				85					90					95	
Val	Trp	Asn	Val	Gln	Leu	Ser	Asp	His	Thr	Leu	Ala	Glu	Arg	Cys	Tyr
			100					105					110		
Ser	Glu	Ala	Ser	Asp	Leu	Lys	Val	Ile	His	Trp	Asn	Ser	Pro	Lys	Lys
			115				120					125			
Leu	Arg	Val	Lys	Asn	Lys	His	Val	Glu	Phe	Phe	Arg	Asn	Phe	Tyr	Leu
			130				135					140			
Thr	Phe	Leu	Glu	Tyr	Asp	Gly	Asn	Leu	Leu	Arg	Arg	Glu	Leu	Phe	Val
145					150					155					160
Cys	Pro	Ser	Gln	Pro	Pro	Pro	Gly	Ala	Glu	Gln	Leu	Gln	Gln	Ala	Leu
			165						170					175	
Ala	Gln	Leu	Asp	Glu	Glu	Asp	Pro	Cys	Phe	Glu	Phe	Arg	Gln	Gln	Gln
			180					185					190		
Leu	Thr	Val	His	Arg	Val	His	Val	Thr	Phe	Leu	Pro	His	Glu	Pro	Pro
			195				200					205			
Pro	Pro	Arg	Pro	His	Asp	Val	Thr	Leu	Val	Ala	Gln	Leu	Ser	Met	Asp
			210			215					220				
Arg	Leu	Gln	Met	Leu	Glu	Ala	Leu	Cys	Arg	His	Trp	Pro	Gly	Pro	Met

225		230		235		240									
Ser	Leu	Ala	Leu	Tyr	Leu	Thr	Asp	Ala	Glu	Ala	Gln	Gln	Phe	Leu	His
			245						250					255	
Phe	Val	Glu	Ala	Ser	Pro	Val	Leu	Ala	Ala	Arg	Gln	Asp	Val	Ala	Tyr
		260						265					270		
His	Val	Val	Tyr	Arg	Glu	Gly	Pro	Leu	Tyr	Pro	Val	Asn	Gln	Leu	Arg
		275					280					285			
Asn	Val	Ala	Leu	Ala	Gln	Ala	Leu	Thr	Pro	Tyr	Val	Phe	Leu	Ser	Asp
	290					295					300				
Ile	Asp	Phe	Leu	Pro	Ala	Tyr	Ser	Leu	Tyr	Asp	Tyr	Leu	Arg	Ala	Ser
305				310						315				320	
Ile	Glu	Gln	Leu	Gly	Leu	Gly	Ser	Arg	Arg	Lys	Ala	Ala	Leu	Val	Val
		325						330					335		
Pro	Ala	Phe	Glu	Thr	Leu	Arg	Tyr	Arg	Phe	Ser	Phe	Pro	His	Ser	Lys
		340						345				350			
Val	Glu	Leu	Leu	Ala	Leu	Leu	Asp	Ala	Gly	Thr	Leu	Tyr	Thr	Phe	Arg
	355						360					365			

<210> 3713

<211> 1719

<212> DNA

<213> Homo sapiens

<400> 3713

```

ccatgggaag tagaacgccg gctcgcatgc ctgcccgcgc gccagcctgc cgggtacggc
60
cttttccgcc ggggcttcca ggtcaaagaa ttcgcctttg ccgctaccgc tttcttacct
120
tccgcacccg ttaagtcttc cggtcggggc gcagtctctg aacacttagc cgcgccatcc
180
gggggtcacac cgcttgaag gaggtgacgg gggcgcgcg gggcgcgga actccccgct
240
gagagtccgc ctgccatgga ctcggaatat tacagcgcg accagtcaga tgatggtggt
300
gctacccag tacaggatga acgggattca gggtcagac gtgaggatga tgtaaagtga
360
caacactccg gatcagacac tggaagtgtg gaacgtcatt cagagaatga aactagtgat
420
cgagaagatg gccccccaa aggacatcat gtgacagact ctgagaacga tgagccctta
480
aatcttaatg ctagtgactc tgaaagtga gagcttcaca ggcaaaagga cagcgactct
540
gaatctgagg aacgtgcaga gcctcctgca agcgattctg aaaatgagga tgtcaatcag
600
catggggagc actctgagag tgaagagacc aggaaattac ctggtagtga ctctgaaaat
660
gaggaacttc ttaatgggca tgcaagtga tcagaaaacg aagatgttgg gaagcatccc
720
gccagtgatt ctgagattga ggagctccag aagagtcctg ctagtgactc tgaaacagaa
780
gatgctctaa aacctcaaat cagtgactct gagagtgagg aacccccaa gcaccaagcc
840
agtgactccg aaaatgagga gcctcccaaa cctcgaatga gtgattctga aagtgaggag
900

```

ctctcctaaac ctcagggtcag tgattcagaa agtgaggaac cccaaggca ccaggccagt
 960
 gactctgaaa atgaggagct tcccaaacct cgtatcagt actcagaaag tgaggaccct
 1020
 ccgaggcacc aggccagtga ctcagaaaat gaagagcttc ccaaaccctg aatcagtgat
 1080
 tcggaaagtg aggatcccc aaggaaccag gccagtgatt cggaaaatga ggagctaccc
 1140
 aaaccccgag tcagtgactc tgagagttag gggcctcaga aggggcctgc cagtgactca
 1200
 gaaactgagg atgcgtccag acacaaacag aagccagagt cagatgatga cagcgacagg
 1260
 gagaataagg gagaggatac agaaatgcag aatgactcct tccattcaga cagccatatg
 1320
 gacagaaaaa agtttcacag ttctgatagt gaggaggaag aacacaaaaa gcaaaaaatg
 1380
 gacagtgatg aagatgaaaa agagggtagg gaggagaaag tagcgaagag aaaagctgct
 1440
 gtgctttctg atagtgaaga tgaagagaaa gcacagcaa agaagagtcg tgttgtctct
 1500
 gatgcagatg actctgacag tgatgctgta tcagacaagt caggcaaaag agagaagacc
 1560
 atagcatctg acagtgagga agaagctggg aaagaattgt ctgataagaa aaatgaagag
 1620
 aaggatctgt ttgggagtga cagtgagtca ggcaatgaag aagaaaatct tattgcagac
 1680
 atatttgag aatctggtga tgaagaggaa gaagaattc
 1719

<210> 3714

<211> 488

<212> PRT

<213> Homo sapiens

<400> 3714

Met	Asp	Ser	Glu	Tyr	Tyr	Ser	Gly	Asp	Gln	Ser	Asp	Asp	Gly	Gly	Ala
1				5					10					15	
Thr	Pro	Val	Gln	Asp	Glu	Arg	Asp	Ser	Gly	Ser	Asp	Gly	Glu	Asp	Asp
			20					25					30		
Val	Asn	Glu	Gln	His	Ser	Gly	Ser	Asp	Thr	Gly	Ser	Val	Glu	Arg	His
			35				40					45			
Ser	Glu	Asn	Glu	Thr	Ser	Asp	Arg	Glu	Asp	Gly	Pro	Pro	Lys	Gly	His
			50				55				60				
His	Val	Thr	Asp	Ser	Glu	Asn	Asp	Glu	Pro	Leu	Asn	Leu	Asn	Ala	Ser
			65			70				75				80	
Asp	Ser	Glu	Ser	Glu	Glu	Leu	His	Arg	Gln	Lys	Asp	Ser	Asp	Ser	Glu
			85						90					95	
Ser	Glu	Glu	Arg	Ala	Glu	Pro	Pro	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Asp
			100					105					110		
Val	Asn	Gln	His	Gly	Ser	Asp	Ser	Glu	Ser	Glu	Glu	Thr	Arg	Lys	Leu
			115				120					125			
Pro	Gly	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Leu	Leu	Asn	Gly	His	Ala	Ser
			130				135					140			
Asp	Ser	Glu	Asn	Glu	Asp	Val	Gly	Lys	His	Pro	Ala	Ser	Asp	Ser	Glu

```

145          150          155          160
Ile Glu Glu Leu Gln Lys Ser Pro Ala Ser Asp Ser Glu Thr Glu Asp
          165          170          175
Ala Leu Lys Pro Gln Ile Ser Asp Ser Glu Ser Glu Glu Pro Pro Arg
          180          185          190
His Gln Ala Ser Asp Ser Glu Asn Glu Glu Pro Pro Lys Pro Arg Met
          195          200          205
Ser Asp Ser Glu Ser Glu Glu Leu Pro Lys Pro Gln Val Ser Asp Ser
          210          215          220
Glu Ser Glu Glu Pro Pro Arg His Gln Ala Ser Asp Ser Glu Asn Glu
          225          230          235          240
Glu Leu Pro Lys Pro Arg Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro
          245          250          255
Arg His Gln Ala Ser Asp Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg
          260          265          270
Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro Arg Asn Gln Ala Ser Asp
          275          280          285
Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg Val Ser Asp Ser Glu Ser
          290          295          300
Glu Gly Pro Gln Lys Gly Pro Ala Ser Asp Ser Glu Thr Glu Asp Ala
          305          310          315          320
Ser Arg His Lys Gln Lys Pro Glu Ser Asp Asp Ser Asp Arg Glu
          325          330          335
Asn Lys Gly Glu Asp Thr Glu Met Gln Asn Asp Ser Phe His Ser Asp
          340          345          350
Ser His Met Asp Arg Lys Lys Phe His Ser Ser Asp Ser Glu Glu Glu
          355          360          365
Glu His Lys Lys Gln Lys Met Asp Ser Asp Glu Asp Glu Lys Glu Gly
          370          375          380
Glu Glu Glu Lys Val Ala Lys Arg Lys Ala Ala Val Leu Ser Asp Ser
          385          390          395          400
Glu Asp Glu Glu Lys Ala Ser Ala Lys Lys Ser Arg Val Val Ser Asp
          405          410          415
Ala Asp Asp Ser Asp Ser Asp Ala Val Ser Asp Lys Ser Gly Lys Arg
          420          425          430
Glu Lys Thr Ile Ala Ser Asp Ser Glu Glu Glu Ala Gly Lys Glu Leu
          435          440          445
Ser Asp Lys Lys Asn Glu Glu Lys Asp Leu Phe Gly Ser Asp Ser Glu
          450          455          460
Ser Gly Asn Glu Glu Glu Asn Leu Ile Ala Asp Ile Phe Gly Glu Ser
          465          470          475          480
Gly Asp Glu Glu Glu Glu Phe
          485

```

<210> 3715

<211> 288

<212> DNA

<213> Homo sapiens

<400> 3715

```

ngccgcggcg cgggccccgc ggggggttaga gggtcaccatg ctgaggggtcg cgtaaaggac
60
accacatccc tggaggctcg aattattgcc ttgtctggca agatccgcag ttatgaagaa
120

```

cacttggaga aacatcgaaa ggacaaagcc cacaaacgct atctgctaata gagcattgac
 180
 cagaggaaaa agatgctcaa aaacctccgt aacaccaact atgatgtctt tgagaagata
 240
 tgctgggggc tgggaattga gtacaccttc cccctctgt attaccgn
 288

<210> 3716

<211> 96

<212> PRT

<213> Homo sapiens

<400> 3716

Xaa	Arg	Gly	Ala	Gly	Pro	Ala	Gly	Val	Arg	Gly	His	His	Ala	Glu	Gly
1				5				10					15		
Arg	Val	Lys	Asp	Thr	Thr	Ser	Leu	Glu	Ala	Arg	Ile	Ile	Ala	Leu	Ser
		20					25						30		
Gly	Lys	Ile	Arg	Ser	Tyr	Glu	Glu	His	Leu	Glu	Lys	His	Arg	Lys	Asp
		35				40					45				
Lys	Ala	His	Lys	Arg	Tyr	Leu	Leu	Met	Ser	Ile	Asp	Gln	Arg	Lys	Lys
	50					55				60					
Met	Leu	Lys	Asn	Leu	Arg	Asn	Thr	Asn	Tyr	Asp	Val	Phe	Glu	Lys	Ile
65				70					75					80	
Cys	Trp	Gly	Leu	Gly	Ile	Glu	Tyr	Thr	Phe	Pro	Pro	Leu	Tyr	Tyr	Arg
			85					90						95	

<210> 3717

<211> 1545

<212> DNA

<213> Homo sapiens

<400> 3717

ntgatcagga cagatgtgtc attattatgt gagagtgtgc atttacaagg gaaatgatta
 60
 ttctggccca taaattatct taaaagctat ttattcgctt atgaacattt ttagagggga
 120
 taacatgggc cctcacaaca tcccaggagg acaaaaacat agcagattta ataattctaat
 180
 ttagcaagat aaaagtgtgg atttttgtga aaggtacaca ttttctttaa caagtaaaag
 240
 tttcagatca ttattgatat ttacttatct taaagtaaag gcattacaca ctcaacattt
 300
 ggctgatct gattttttaa cttcatccct aggattgata ttgctgatga tattattaat
 360
 gccagtgaag gtaacagaga ctgttcaaaa cctgtggcta gcactaattt agacaatgaa
 420
 gctatgcagc aagatttgtt atttgagaat gaagaaaata cccagtctgt aggtatattg
 480
 ttagagccat gcagtgaccg tggatgatgt gaagatggct gtcttgagag ggaagaatat
 540
 ttgttatttg acagtgataa attgtcacac ttgattcttg attctagtag caagatatgt
 600
 gatttgaatg ccaacactga atcagaagta ccaggagggtc agagtgttgg tgttcaaggg
 660

gaagcagcgt gtgtcagtat tccacattta gatctgaaga atgtttctga tggtgataaa
 720
 tgggaagagc ctttctctgc ttttaagtct tggcaggagg actctgagtc tggagaagct
 780
 cagctgtctc cacaagctgg aagaatgaat catcaccctt tgggaagagga ctgtcctcca
 840
 gtattatcac accgcagttt agattttggt caaagccagc gtttctaca tgatccagaa
 900
 aagttggatt cctcatctaa agcactgtct tttactagaa ttcgaagatc atcctttagt
 960
 tcaaaagatg aaaagagaga ggacagaaca ctttatcagc tggtaagaa acttcagaag
 1020
 aaaatcagac aatttgagga acagtttgaa agggaaagaa atagcaagcc ctctacagt
 1080
 gatattgctg ccaatccaaa ggtattaaaa tggatgacag agcttacaaa actgcggaag
 1140
 caaattaaag atgcaaaaaca caaaaattct gatggagaat ttgtacctca gacacgtcca
 1200
 cgtagtaaca cacttccaaa aagctttggc tcttctctag accatgaaga tgaagagaat
 1260
 gaagatgaac ccaaggtcat tcagaaggag aaaaaacat ctaagaagc aacccttgaa
 1320
 cttattctta aaagactgaa agaaaaacgt attgagaggt gtcttccaga agatatcaag
 1380
 aaaatgacca aagatcattt ggtagaagag aaagcttctc ttcagaaaag tcttctttac
 1440
 tatgaaagtc aacatggaag gccggtgacc aaggaagaaa ggcacattgt taaacctctc
 1500
 tatgatagat acaggcttgt aaaacaaatg ctgacaagag ctagc
 1545

<210> 3718

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3718

Met	Gln	Gln	Asp	Cys	Val	Phe	Glu	Asn	Glu	Glu	Asn	Thr	Gln	Ser	Val
1				5					10					15	
Gly	Ile	Leu	Leu	Glu	Pro	Cys	Ser	Asp	Arg	Gly	Asp	Ser	Glu	Asp	Gly
		20						25					30		
Cys	Leu	Glu	Arg	Glu	Glu	Tyr	Leu	Leu	Phe	Asp	Ser	Asp	Lys	Leu	Ser
		35					40					45			
His	Leu	Ile	Leu	Asp	Ser	Ser	Ser	Lys	Ile	Cys	Asp	Leu	Asn	Ala	Asn
	50				55					60					
Thr	Glu	Ser	Glu	Val	Pro	Gly	Gly	Gln	Ser	Val	Gly	Val	Gln	Gly	Glu
65				70					75					80	
Ala	Ala	Cys	Val	Ser	Ile	Pro	His	Leu	Asp	Leu	Lys	Asn	Val	Ser	Asp
		85						90					95		
Gly	Asp	Lys	Trp	Glu	Glu	Pro	Phe	Pro	Ala	Phe	Lys	Ser	Trp	Gln	Glu
	100						105						110		
Asp	Ser	Glu	Ser	Gly	Glu	Ala	Gln	Leu	Ser	Pro	Gln	Ala	Gly	Arg	Met
	115						120					125			
Asn	His	His	Pro	Leu	Glu	Glu	Asp	Cys	Pro	Pro	Val	Leu	Ser	His	Arg

130 135 140
 Ser Leu Asp Phe Gly Gln Ser Gln Arg Phe Leu His Asp Pro Glu Lys
 145 150 155 160
 Leu Asp Ser Ser Ser Lys Ala Leu Ser Phe Thr Arg Ile Arg Arg Ser
 165 170 175
 Ser Phe Ser Ser Lys Asp Glu Lys Arg Glu Asp Arg Thr Pro Tyr Gln
 180 185 190
 Leu Val Lys Lys Leu Gln Lys Lys Ile Arg Gln Phe Glu Glu Gln Phe
 195 200 205
 Glu Arg Glu Arg Asn Ser Lys Pro Ser Tyr Ser Asp Ile Ala Ala Asn
 210 215 220
 Pro Lys Val Leu Lys Trp Met Thr Glu Leu Thr Lys Leu Arg Lys Gln
 225 230 235 240
 Ile Lys Asp Ala Lys His Lys Asn Ser Asp Gly Glu Phe Val Pro Gln
 245 250 255
 Thr Arg Pro Arg Ser Asn Thr Leu Pro Lys Ser Phe Gly Ser Ser Leu
 260 265 270
 Asp His Glu Asp Glu Glu Asn Glu Asp Glu Pro Lys Val Ile Gln Lys
 275 280 285
 Glu Lys Lys Pro Ser Lys Glu Ala Thr Leu Glu Leu Ile Leu Lys Arg
 290 295 300
 Leu Lys Glu Lys Arg Ile Glu Arg Cys Leu Pro Glu Asp Ile Lys Lys
 305 310 315 320
 Met Thr Lys Asp His Leu Val Glu Glu Lys Ala Ser Leu Gln Lys Ser
 325 330 335
 Leu Leu Tyr Tyr Glu Ser Gln His Gly Arg Pro Val Thr Lys Glu Glu
 340 345 350
 Arg His Ile Val Lys Pro Leu Tyr Asp Arg Tyr Arg Leu Val Lys Gln
 355 360 365
 Met Leu Thr Arg Ala Ser
 370

<210> 3719

<211> 422

<212> DNA

<213> Homo sapiens

<400> 3719

nnncatctgc gctgagtgagg agtataataa aatacctcnn cactggggac tgggatggga
 60

ttttgggctt ggctgctccg tggtttgatc ttctgcggtt tgcctggggtc ctacatgggt
 120

gggcaaccag aaccccggtg gggaaagaat aacaaaaaa agtttgagtg caacagtaga
 180

cagcccggtt gcaaaaatgt gtgttttgat gacttcttcc ccatttccca agtcagactt
 240

tgggccttac aactgataat ggtctccaca ccttcacttc tgggtggtttt acatgtagcc
 300

tatcatgagg gtagagagaa aaggcacaga aagaaactct atgtcagccc aggtacaatg
 360

gatgggggcc tatggtacgc ttatcttacc agcctcattg ttaaaactgg ttttgaaacn
 420

nn

422

<210> 3720
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3720
 Met Gly Phe Trp Ala Trp Leu Leu Arg Gly Leu Ile Phe Arg Gly Leu
 1 5 10 15
 Pro Gly Ser Tyr Met Gly Gly Gln Pro Glu Pro Arg Val Gly Lys Asn
 20 25 30
 Asn Gln Lys Lys Phe Glu Cys Asn Ser Arg Gln Pro Gly Cys Lys Asn
 35 40 45
 Val Cys Phe Asp Asp Phe Phe Pro Ile Ser Gln Val Arg Leu Trp Ala
 50 55 60
 Leu Gln Leu Ile Met Val Ser Thr Pro Ser Leu Val Val Leu His
 65 70 75 80
 Val Ala Tyr His Glu Gly Arg Glu Lys Arg His Arg Lys Lys Leu Tyr
 85 90 95
 Val Ser Pro Gly Thr Met Asp Gly Gly Leu Trp Tyr Ala Tyr Leu Ile
 100 105 110
 Ser Leu Ile Val Lys Thr Gly Phe Glu Thr
 115 120

<210> 3721
 <211> 4728
 <212> DNA
 <213> Homo sapiens

<400> 3721
 agcgagaagg agaaggaaga gttggagcgg ctgcagaaag aggaggagga gaggaagaag
 60
 aggctgcagc tgtatgtgtt cgtgatgcgc tgcacgcctt acccctttaa tgccaagcag
 120
 cccaccgaca tggctgcgag gcagcagaag atcagcaaac agcagctgca gacagtcaag
 180
 gaccgggtttc aggctttcct caatggggaa acccagatca tggctgacga agccttcatg
 240
 aacgctgtgc agagttacta tgagggtgtc ctgaagagcg accgtgtggc ccgcatgggt
 300
 cagagtggag gctgttccgc caacgactcc cgggaggtct tcaagaagca cattgagaag
 360
 agagtgcgca gcctgcctga gattgacggc ctcagcaagg agactgtgct gagctcctgg
 420
 atggccaaat ttgatgccat ctaccgtgga gaagaggacc cgcggaagca gcaggcccgg
 480
 atgacagcca gcgcagcctc cgagctgatt ctgagcaagg agcaactcta tgagatgttc
 540
 cagaacattc ttgggatcaa gaagttcgaa catcagctcc tttaaatgc ctgccagctg
 600
 gacaatccag atgagcaagc agcccagatc agacgagagc tggatggacg tctacaaatg
 660
 gcagaccaa tagccaggga acgcaaattt cccaagtgtg tatccaaaga aatggaaaac
 720

atgtacattg aggagctgaa gtcattctgtc aacctgctca tggccaactt ggagagcatg
780
ccggtatcca aaggcgggga gttcaagctc cagaaactca aacgcagcca caatgcttcc
840
atcatcgaca tgggcgagga gagtgagaac cagctctcca agtcagatgt cgtgctgtct
900
ttctcattgg aggtggtaat tatggaagtc caaggcctca aatctttggc tccaaatcgc
960
atcgtatatt gcacaatgga ggtggaagga ggagagaaac tacagactga tcaggccgag
1020
gcttctaaac caacctgggg caccaggggt gacttctcca caaccatgc actgccagct
1080
gtgaaggatga agctgttcac agagagcaca ggcgtcctgg cgttgaggga caaggagctt
1140
gggcggggtta ttctccatcc cacccegaac agccccaac agtcagagtgc gcacaaaatg
1200
acagctctcca aaaactgccc caaccaagat ctcaaatca aacttgctgt ccgaatggat
1260
aagcctcaaa acatgaagca ttctgggtat ttatgggcca tcggtaagaa tgtctggaag
1320
agatggaaga aaaggttttt tgtattggtg caggtcagtc agtacacgtt tgccatgtgc
1380
agttatcggg agaagaaagc ggagcctcag gaacttctac aattggatgg ctacactgtg
1440
gattacaccg acccccagcc aggtttggag ggtggccgag ccttcttcaa tgctgtcaag
1500
gaggagagaca ccgtgatatt tgccagtgc gatgaacaag accgcattcct gtgggtccag
1560
gccaatgtatc gggccacggg gcagtcacac aagcctgtgc ccccgaccca agtccagaaa
1620
ctcaacgcca agggaggaaa tgtacctcag ctggatgccc ctatctctca attttctgga
1680
ctgaaggacg cagatagagc tcaaaaacat ggcattggatg aatttatctc ttccaacccc
1740
tgtaactttg accacgcttc cctctttgag atggtacaac gccttacttt ggatcacaga
1800
cttaatgatt cctattcttg cctgggctgg ttcagtcctg gccagggtgtt tgtactagac
1860
gagtattgcg ccgaaatgg agtccggggg tgtcaccgac atctctgcta cctcagagac
1920
ttgcttgaac gggcagaaaa tggcgccatg atcgacccca cccttcttca ctacagcttt
1980
gccttctgtg catcccatgt ccatgggaac aggcctgatg gaattggaac tgtgactgtt
2040
gaagaaaagg aacgttttga agaaatcaaa gagaggctcc gagttctgct agaaaatcag
2100
attacacatt ttaggtattg ctttccattt ggtcgacctg aagggtgcttt gaaagctact
2160
ctctcactct tggaaagggt tttgatgaaa gatattgtta cccagtgcc acaagaggag
2220
gtaaaaacag ttatccgtaa atgtctggaa caggctgcgt tagtcaacta ttctcggtc
2280
tcagagtatg ccaaaatcga agagaatcaa aaggatgcag aaaatgtagg ccggttaatc
2340

actcctgcc aaaaagcttga agatacaata cgtcttgctg aactagtc at gaagttctt
2400
cagcaaaatg aggagcacca cgcagagcca catgttgata aaggagaggc ctttgctggtg
2460
tggtcagatt taatgggtgga gcatgctggag acgttcctgt cactctttgc agtagacatg
2520
gatgcagcct tagagggtgca acctccagac acatgggaca gttttccact atttcagctg
2580
ctgaatgatt ttctccgtac tgactataat ttgtgcaatg gaaaatttca caaacacctg
2640
caagacctgt ttgccccact tgttggttaga tatgtggatc tgatggagtc ctcaattgca
2700
caatccattc acaggggctt tgagcgggag tcatgggaac cagtcaataa tgggtcaggc
2760
acctcagaag atctgttttg gaaacctgac gcccttcaga ccttcattcg ggacctgcac
2820
tggcctgaag aagagtttgg aaagcacctg gaacaacggc tgaagttgat ggcaagtgc
2880
atgatcgaat cttgtgtcaa aagaaccagg attgcatttg aagttaagct gcaaaaaacc
2940
agtcgatcaa cagattttcg agtcccacag tcaatatgca ccatgtttaa tgttatgggt
3000
gatgccaaag ctcaatcaac aaaactttgc agcatggaaa tgggccaaga gtttgctaaa
3060
atgtggcatc aataccattc aaaaatagac gaactaattg aagaaactgt taaagaaatg
3120
ataacactct tggttgcaaa gttegttact atcttgggaag gagtgctggc aaaattatcc
3180
agatatgacg aagggaactt gttttcttct tttctgtcat ttaccgtgaa ggcagcttcc
3240
aaatatgtgg atgtacctaa acccgggatg gacgtggccg acgcctacgt gactttcgtc
3300
cgccattctc aggatgtcct gcgtgataag gtcaatgagg agatgtacat agaaaggtta
3360
tttgatcaat ggtacaacag ctccatgaac gtgatctgca cctggttgac ggaccggatg
3420
gacttacagc ttcatattta tcagttgaaa acactaatta ggatggtaaa gaaaacctac
3480
agagatttcc gattgcaagg ggtcctggac tccaccttaa acagcaagac ctatgaaacg
3540
atccggaacc gtctcactgt ggaggaagcc acagcatcag tgagtgaagg tgggggactg
3600
cagggcatca gcatgaagga cagcgatgag gaagacgaag aagacgatta gaccatttgg
3660
tcctagagtc tgctgggaca gagtccgtga atcagtgc at gtccttagtc tgttagttaa
3720
accattagg aattttctgt caactaccat gcccatgaga tgtttatcaa tacaactgcc
3780
attttagcta tgtggtacca agattagcaa atgaccttca tatccactga tttcctgatg
3840
tccatgtcta tatgtttaca agcaatatgg agcaccattc tttaaatact gttcatggag
3900
aatacatagt ctaaccacta ggcgtgtccc tgttatcagc aaagatcaat gatgcttcat
3960

tcatgtacta tgtatgcatt ggtggtaaataat ggatgtgagg gcaagtacat caagtacatt
 4020
 cactctgttt cacgtatgtg gatgccagtt aattaaatga gtacgtaaat aaattaatta
 4080
 aaacacatag atctgctttg tgtttttatt tttatttttt gaaaaacaaa aggcaagtct
 4140
 ccaacaatta acttttgatg ctttctgttc ccctaaaacc aaaaaatgaa ccccttgtgt
 4200
 cgttgtaaac ccatcctttc atttactcat ataattagcc aaaaaaaaaa ggatggctac
 4260
 ataccaatgg attgattctc ttaattgccg cggcaagggg gcgatcctat catgacttaa
 4320
 catcaagcgc gcagttcaaaa actactgtct tctgtcaaag ttttctctc ttaaattgta
 4380
 ttttgctttt acgtctcaac tgtgtatgta aaaaaaacga atatttaaat tacaacccta
 4440
 gactaaaaat gtgtttataa taagatgtgg atatttcctt cagtagattg taaccataat
 4500
 ttaaattatt ttgttcaca ctgtttttta tatctgtcat gtacattgca ttttgatctg
 4560
 taaactgcaca accctggggg ttgctgcaga gctatttctt tccatgtaaa gtagtggatc
 4620
 catcttgctt ttgccttata taaagcctac agttatggaa gtgtggaaaa ctgtggcttc
 4680
 tcaataaata ttcagatgtc ctaagaataa aaaaaaaaaa aaaaaaaaaa
 4728

<210> 3722

<211> 1216

<212> PRT

<213> Homo sapiens

<400> 3722

Ser	Glu	Lys	Glu	Lys	Glu	Glu	Leu	Glu	Arg	Leu	Gln	Lys	Glu	Glu	Glu
1				5					10				15		
Glu	Arg	Lys	Lys	Arg	Leu	Gln	Leu	Tyr	Val	Phe	Val	Met	Arg	Cys	Ile
		20					25					30			
Ala	Tyr	Pro	Phe	Asn	Ala	Lys	Gln	Pro	Thr	Asp	Met	Ala	Arg	Arg	Gln
		35					40				45				
Gln	Lys	Ile	Ser	Lys	Gln	Gln	Leu	Gln	Thr	Val	Lys	Asp	Arg	Phe	Gln
	50					55					60				
Ala	Phe	Leu	Asn	Gly	Glu	Thr	Gln	Ile	Met	Ala	Asp	Glu	Ala	Phe	Met
	65				70				75					80	
Asn	Ala	Val	Gln	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val
			85					90					95		
Ala	Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Ser	Arg	Glu
		100						105					110		
Val	Phe	Lys	Lys	His	Ile	Glu	Lys	Arg	Val	Arg	Ser	Leu	Pro	Glu	Ile
	115					120						125			
Asp	Gly	Leu	Ser	Lys	Glu	Thr	Val	Leu	Ser	Ser	Trp	Met	Ala	Lys	Phe
	130					135					140				
Asp	Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Pro	Arg	Lys	Gln	Gln	Ala	Arg
	145				150				155					160	
Met	Thr	Ala	Ser	Ala	Ala	Ser	Glu	Leu	Ile	Leu	Ser	Lys	Glu	Gln	Leu

[illegible]

595				600				605							
Gly	Trp	Phe	Ser	Pro	Gly	Gln	Val	Phe	Val	Leu	Asp	Glu	Tyr	Cys	Ala
610				615				620							
Arg	Asn	Gly	Val	Arg	Gly	Cys	His	Arg	His	Leu	Cys	Tyr	Leu	Arg	Asp
625				630				635				640			
Leu	Leu	Glu	Arg	Ala	Glu	Asn	Gly	Ala	Met	Ile	Asp	Pro	Thr	Leu	Leu
645				650				655							
His	Tyr	Ser	Phe	Ala	Phe	Cys	Ala	Ser	His	Val	His	Gly	Asn	Arg	Pro
660				665				670							
Asp	Gly	Ile	Gly	Thr	Val	Thr	Val	Glu	Glu	Lys	Glu	Arg	Phe	Glu	Glu
675				680				685							
Ile	Lys	Glu	Arg	Leu	Arg	Val	Leu	Leu	Glu	Asn	Gln	Ile	Thr	His	Phe
690				695				700							
Arg	Tyr	Cys	Phe	Pro	Phe	Gly	Arg	Pro	Glu	Gly	Ala	Leu	Lys	Ala	Thr
705				710				715				720			
Leu	Ser	Leu	Leu	Glu	Arg	Val	Leu	Met	Lys	Asp	Ile	Val	Thr	Pro	Val
725				730				735							
Pro	Gln	Glu	Glu	Val	Lys	Thr	Val	Ile	Arg	Lys	Cys	Leu	Glu	Gln	Ala
740				745				750							
Ala	Leu	Val	Asn	Tyr	Ser	Arg	Leu	Ser	Glu	Tyr	Ala	Lys	Ile	Glu	Glu
755				760				765							
Asn	Gln	Lys	Asp	Ala	Glu	Asn	Val	Gly	Arg	Leu	Ile	Thr	Pro	Ala	Lys
770				775				780							
Lys	Leu	Glu	Asp	Thr	Ile	Arg	Leu	Ala	Glu	Leu	Val	Ile	Glu	Val	Leu
785				790				795				800			
Gln	Gln	Asn	Glu	Glu	His	His	Ala	Glu	Pro	His	Val	Asp	Lys	Gly	Glu
805				810				815							
Ala	Phe	Ala	Trp	Ser	Asp	Leu	Met	Val	Glu	His	Ala	Glu	Thr	Phe	
820				825				830							
Leu	Ser	Leu	Phe	Ala	Val	Asp	Met	Asp	Ala	Ala	Leu	Glu	Val	Gln	Pro
835				840				845							
Pro	Asp	Thr	Trp	Asp	Ser	Phe	Pro	Leu	Phe	Gln	Leu	Leu	Asn	Asp	Phe
850				855				860							
Leu	Arg	Thr	Asp	Tyr	Asn	Leu	Cys	Asn	Gly	Lys	Phe	His	Lys	His	Leu
865				870				875				880			
Gln	Asp	Leu	Phe	Ala	Pro	Leu	Val	Val	Arg	Tyr	Val	Asp	Leu	Met	Glu
885				890				895							
Ser	Ser	Ile	Ala	Gln	Ser	Ile	His	Arg	Gly	Phe	Glu	Arg	Glu	Ser	Trp
900				905				910							
Glu	Pro	Val	Asn	Asn	Gly	Ser	Gly	Thr	Ser	Glu	Asp	Leu	Phe	Trp	Lys
915				920				925							
Leu	Asp	Ala	Leu	Gln	Thr	Phe	Ile	Arg	Asp	Leu	His	Trp	Pro	Glu	Glu
930				935				940							
Glu	Phe	Gly	Lys	His	Leu	Glu	Gln	Arg	Leu	Lys	Leu	Met	Ala	Ser	Asp
945				950				955				960			
Met	Ile	Glu	Ser	Cys	Val	Lys	Arg	Thr	Arg	Ile	Ala	Phe	Glu	Val	Lys
965				970				975							
Leu	Gln	Lys	Thr	Ser	Arg	Ser	Thr	Asp	Phe	Arg	Val	Pro	Gln	Ser	Ile
980				985				990							
Cys	Thr	Met	Phe	Asn	Val	Met	Val	Asp	Ala	Lys	Ala	Gln	Ser	Thr	Lys
995				1000				1005							
Leu	Cys	Ser	Met	Glu	Met	Gly	Gln	Glu	Phe	Ala	Lys	Met	Trp	His	Gln
1010				1015				1020							
Tyr	His	Ser	Lys	Ile	Asp	Glu	Leu	Ile	Glu	Glu	Thr	Val	Lys	Glu	Met

```

1025          1030          1035          1040
Ile Thr Leu Leu Val Ala Lys Phe Val Thr Ile Leu Glu Gly Val Leu
          1045          1050          1055
Ala Lys Leu Ser Arg Tyr Asp Glu Gly Thr Leu Phe Ser Ser Phe Leu
          1060          1065          1070
Ser Phe Thr Val Lys Ala Ala Ser Lys Tyr Val Asp Val Pro Lys Pro
          1075          1080          1085
Gly Met Asp Val Ala Asp Ala Tyr Val Thr Phe Val Arg His Ser Gln
          1090          1095          1100
Asp Val Leu Arg Asp Lys Val Asn Glu Glu Met Tyr Ile Glu Arg Leu
1105          1110          1115          1120
Phe Asp Gln Trp Tyr Asn Ser Ser Met Asn Val Ile Cys Thr Trp Leu
          1125          1130          1135
Thr Asp Arg Met Asp Leu Gln Leu His Ile Tyr Gln Leu Lys Thr Leu
          1140          1145          1150
Ile Arg Met Val Lys Lys Thr Tyr Arg Asp Phe Arg Leu Gln Gly Val
          1155          1160          1165
Leu Asp Ser Thr Leu Asn Ser Lys Thr Tyr Glu Thr Ile Arg Asn Arg
          1170          1175          1180
Leu Thr Val Glu Glu Ala Thr Ala Ser Val Ser Glu Gly Gly Gly Leu
1185          1190          1195          1200
Gln Gly Ile Ser Met Lys Asp Ser Asp Glu Glu Asp Glu Glu Asp Asp
          1205          1210          1215

```

<210> 3723

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3723

```

atcctcttga tgcacaagat gaggggttttg cacctggacc tcaagccaga gaacatcctg
60
tgtgtcaaca ccaccgggca tttggtgaag atcattgact ttggcctggc acggaggtat
120
aaccccaacg agaagctgaa ggtgaacttt gggaccccag agttcctgtc acctgaggtg
180
gtgaattatg accaaatctc cgataagaca gacatgtgga gtatgggggt gatcacctac
240
atgctgtctga gcggcctctc ccccttctctg ggagatgatg acacagagac cctaaacaac
300
gttctatctg gcaactggtg ctttgatgaa gagacctttg aggccgtatc agacgaggcc
360
aaagactttg tctccaacct catcgtcaag gaccagaggg cccggatgaa cgctgcccag
420
tgtctcgccc atccctggct caacaacctg gcggagaaag ccaaacgctg taaccgacgc
480
cttaagtccc agatcttgct taagaaatac ctcatgaaga ggcgctggaa gaaaaacttc
540
attgctgtca gcctgccaa ccgcttcaag aagatcagca gctcgggggc actgatggct
600
ctgggggtct gagccctggg cgagctgaa gcctggacgc agccacacag tggccggggc
660
tgaagccaca cagcccagaa ggccagaaaa ggcagccaga tccccagggc agcctcgtta
720

```

ggacaaggct gtgccaggct gggaggctcg gggctcccca cgcccccatg cagtgaccgc
 780
 ttccccgatg tgagccgcct cggagtgtgg cctggatcca tctgctagc
 830

<210> 3724
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 3724
 Ile Leu Leu Met His Lys Met Arg Val Leu His Leu Asp Leu Lys Pro
 1 5 10 15
 Glu Asn Ile Leu Cys Val Asn Thr Thr Gly His Leu Val Lys Ile Ile
 20 25 30
 Asp Phe Gly Leu Ala Arg Arg Tyr Asn Pro Asn Glu Lys Leu Lys Val
 35 40 45
 Asn Phe Gly Thr Pro Glu Phe Leu Ser Pro Glu Val Val Asn Tyr Asp
 50 55 60
 Gln Ile Ser Asp Lys Thr Asp Met Trp Ser Met Gly Val Ile Thr Tyr
 65 70 75 80
 Met Leu Leu Ser Gly Leu Ser Pro Phe Leu Gly Asp Asp Asp Thr Glu
 85 90 95
 Thr Leu Asn Asn Val Leu Ser Gly Asn Trp Tyr Phe Asp Glu Glu Thr
 100 105 110
 Phe Glu Ala Val Ser Asp Glu Ala Lys Asp Phe Val Ser Asn Leu Ile
 115 120 125
 Val Lys Asp Gln Arg Ala Arg Met Asn Ala Ala Gln Cys Leu Ala His
 130 135 140
 Pro Trp Leu Asn Asn Leu Ala Glu Lys Ala Lys Arg Cys Asn Arg Arg
 145 150 155 160
 Leu Lys Ser Gln Ile Leu Leu Lys Lys Tyr Leu Met Lys Arg Arg Trp
 165 170 175
 Lys Lys Asn Phe Ile Ala Val Ser Ala Ala Asn Arg Phe Lys Lys Ile
 180 185 190
 Ser Ser Ser Gly Ala Leu Met Ala Leu Gly Val
 195 200

<210> 3725
 <211> 1244
 <212> DNA
 <213> Homo sapiens

<400> 3725
 ngaattcatg tgtcaggtaa ggatattaca aggaaacctg agatttctgg gcatgtaatt
 60
 tctgctcatg gcttatcagt cttgaatctg cgggatggaa gagagctgga tttcagatct
 120
 gaccatcttc acttttgttt tcaggccttt aaaattgtgc cctacaacac agagaccctt
 180
 gataaactgc taaccgaatc cctgaagaac aatatccctg caagcggact gcacctcttt
 240
 ggaatcaacc agctggaaga agaagatatg atgacaaatc agagggatga agagctgccc
 300

accctgttgc attttgctgc gaagtatgga ctgaagaacc tcaactgcctt gttgctcacc
 360
 tgcccaggag ccctgcaggc gtacagcgtg gccacaagc atggccacta cccaacacc
 420
 atcgtgaga aacacggctt cagggacctg cggcagttca tcgacgagta tgtggaaacg
 480
 gtggacatgc tcaagagtca cattaagag gaactgatgc acggggagga ggctgatgct
 540
 gtgtacgagt ccatggccca cctttccaca gacctgctta tgaaatgctc gctcaacccc
 600
 ggctgtgacg aggatctcta tgagtccatg gctgcctttg tcccagctgc cactgaagac
 660
 ctctatgttg aaatgcttca ggccagtaca tctaaccxaa tccctggaga tggtttctct
 720
 cgggccacta aggactctat gatccgcaag tttttagaag gcaacagcat gggaatgacc
 780
 aatctggaga gagatcagtg ccattcttggc caggaagaag atgtttatca cacggtggat
 840
 gacgatgagg ccttttctgt ggacttgccc agcaggcccc ctgtcccagt gccagacca
 900
 gagaccactg ctcttggtgc tcaccagctg cctgacaacg aaccatacat ttttaaaggc
 960
 aagtatggca gggaatgatg tccaactggt tctttggagc ttctcaacag ggatttctct
 1020
 gatgacctgg ctttttgaac cattgctcag agactatccc cttctaaatg gtcttcaccc
 1080
 agccctacga gacagggttc atatcctggg gccagattct ggagctagaa taggagtaat
 1140
 gaccagagtc agtgctggcc ttcttggaag tatttacgca cagttgcaaa ggcaggtaaa
 1200
 caagaccctt gatatatattt tatctctga accccttcac gcgt
 1244

<210> 3726

<211> 325

<212> PRT

<213> Homo sapiens

<400> 3726

Xaa	Ile	His	Val	Ser	Gly	Lys	Asp	Ile	Thr	Arg	Lys	Pro	Glu	Ile	Ser
1				5				10					15		
Gly	His	Val	Ile	Ser	Ala	His	Gly	Leu	Ser	Val	Leu	Asn	Leu	Arg	Asp
		20					25					30			
Gly	Arg	Glu	Leu	Asp	Phe	Arg	Ser	Asp	His	Leu	His	Phe	Cys	Phe	Gln
		35				40				45					
Ala	Phe	Lys	Ile	Val	Pro	Tyr	Asn	Thr	Glu	Thr	Leu	Asp	Lys	Leu	Leu
	50				55				60						
Thr	Glu	Ser	Leu	Lys	Asn	Ile	Pro	Ala	Ser	Gly	Leu	His	Leu	Phe	
65				70				75					80		
Gly	Ile	Asn	Gln	Leu	Glu	Glu	Glu	Asp	Met	Met	Thr	Asn	Gln	Arg	Asp
		85				90					95				
Glu	Glu	Leu	Pro	Thr	Leu	Leu	His	Phe	Ala	Ala	Lys	Tyr	Gly	Leu	Lys
		100				105					110				
Asn	Leu	Thr	Ala	Leu	Leu	Leu	Thr	Cys	Pro	Gly	Ala	Leu	Gln	Ala	Tyr

115	120	125
Ser Val Ala Asn Lys His Gly His Tyr Pro Asn Thr Ile Ala Glu Lys		
130	135	140
His Gly Phe Arg Asp Leu Arg Gln Phe Ile Asp Glu Tyr Val Glu Thr		
145	150	155
Val Asp Met Leu Lys Ser His Ile Lys Glu Glu Leu Met His Gly Glu		160
165	170	175
Glu Ala Asp Ala Val Tyr Glu Ser Met Ala His Leu Ser Thr Asp Leu		
180	185	190
Leu Met Lys Cys Ser Leu Asn Pro Gly Cys Asp Glu Asp Leu Tyr Glu		
195	200	205
Ser Met Ala Ala Phe Val Pro Ala Ala Thr Glu Asp Leu Tyr Val Glu		
210	215	220
Met Leu Gln Ala Ser Thr Ser Asn Pro Ile Pro Gly Asp Gly Phe Ser		
225	230	235
Arg Ala Thr Lys Asp Ser Met Ile Arg Lys Phe Leu Glu Gly Asn Ser		240
245	250	255
Met Gly Met Thr Asn Leu Glu Arg Asp Gln Cys His Leu Gly Gln Glu		
260	265	270
Glu Asp Val Tyr His Thr Val Asp Asp Asp Glu Ala Phe Ser Val Asp		
275	280	285
Leu Ala Ser Arg Pro Pro Val Pro Val Pro Arg Pro Glu Thr Thr Ala		
290	295	300
Pro Gly Ala His Gln Leu Pro Asp Asn Glu Pro Tyr Ile Phe Lys Gly		
305	310	315
Lys Tyr Gly Arg Glu		320
325		

<210> 3727

<211> 630

<212> DNA

<213> Homo sapiens

<400> 3727

cggattcgag tcatcaagaa gaaaaagggtc attatgaaga agcgggaagaa gctaactcta
 60
 actcgcccca ccccaactggt gactgccggg ccccttgtga ccccaactcc agcagggacc
 120
 ctcgaccceg ctgagaaaca agaaacaggc tgtcctcctt tgggtctgga gtccctgcga
 180
 gtttcagata gccggcttga ggcattccagc agccagtcct ttggtcttgg accacaccga
 240
 ggacggctca acattcagtc aggcctggag gacggcgatc tatatgatgg agcctggtgt
 300
 gctgaggagc aggacgccga tccatggttt caggtggacg ctgggcaccc caccgccttc
 360
 tcgggtgtta tcacacaggg caggaactct gtctggaggt atgactgggt cacatcatac
 420
 aagggtccagt tcagcaatga cagtcggacc tgggtgggaa gtaggaacca cagcagtggg
 480
 atggacgcag tatttctctgc caattcagac ccagaaactc cagtgcctgaa cctcctgccg
 540
 gagccccagg tggccccgtt cattcgcttg ctgccccaga cctggctcca gggaggcgcg
 600

ccttgccctcc gggcagagat cctggcctgc
630

<210> 3728

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3728

Arg Ile Arg Val Ile Lys Lys Lys Lys Val Ile Met Lys Lys Arg Lys
1 5 10 15
Lys Leu Thr Leu Thr Arg Pro Thr Pro Leu Val Thr Ala Gly Pro Leu
20 25 30
Val Thr Pro Thr Pro Ala Gly Thr Leu Asp Pro Ala Glu Lys Gln Glu
35 40 45
Thr Gly Cys Pro Pro Leu Gly Leu Glu Ser Leu Arg Val Ser Asp Ser
50 55 60
Arg Leu Glu Ala Ser Ser Ser Gln Ser Phe Gly Leu Gly Pro His Arg
65 70 75 80
Gly Arg Leu Asn Ile Gln Ser Gly Leu Glu Asp Gly Asp Leu Tyr Asp
85 90 95
Gly Ala Trp Cys Ala Glu Glu Gln Asp Ala Asp Pro Trp Phe Gln Val
100 105 110
Asp Ala Gly His Pro Thr Arg Phe Ser Gly Val Ile Thr Gln Gly Arg
115 120 125
Asn Ser Val Trp Arg Tyr Asp Trp Val Thr Ser Tyr Lys Val Gln Phe
130 135 140
Ser Asn Asp Ser Arg Thr Trp Trp Gly Ser Arg Asn His Ser Ser Gly
145 150 155 160
Met Asp Ala Val Phe Pro Ala Asn Ser Asp Pro Glu Thr Pro Val Leu
165 170 175
Asn Leu Leu Pro Glu Pro Gln Val Ala Arg Phe Ile Arg Leu Leu Pro
180 185 190
Gln Thr Trp Leu Gln Gly Gly Ala Pro Cys Leu Arg Ala Glu Ile Leu
195 200 205
Ala Cys
210

<210> 3729

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 3729

naggaaacgc tttgtctgtc cggaagccg acggcccgct gctggcctcc gtgacgcggg
60
cctcctccgc gcctgcggc atggagtaga aagggaaccgc ggaagccga aagcgaaggc
120
atcaagttat cagcagatgt caaacattt gtccccagat ttgccgggct caatgtggca
180
tggttagagt cctcagaagc atgtgtcttc ccagctctg cagccacata ctatccgttt
240
gttcaggaac caccagtgc agagcagaaa atatatactg aagacatggc ctttggagct
300

tcaacttttc cacctcagta tttatcttct gagataactc ttcattccata tgcctattct
 360
 ccttataccc ttgactccac acagaatggt tactcagtgc ctggctccca gtatctttat
 420
 aaccaaccca gttgttaccg aggttttcaa acagtgaagc atcgaaatga gaacacatgc
 480
 cctctccac aagaaatgaa agctctgttt aagaagaaaa cctatgatga gaaaaaacg
 540
 tatgatcagc aaaagtttga cagtgaaggg gctgatggaa ctatatcatc tgagataaaa
 600
 tcagctagag gttcacatca tttgtccatt tacgctgaga atagtttgaa atcagatggg
 660
 taccataagc gaacagacag gaaatccaga atcattgcaa aaaatgtatc tacctccaaa
 720
 cctgagtttg aatttaccac actggacttt cctgaactgc aagggtgcaga gaacaatatg
 780
 tcagagatac agaagcaacc caagtgggga cctgtccact ctgtctctac cgacatttct
 840
 cttctaagag aagtagtaaa accagctgca gtgttatcaa agggtgaaat agtggtgaaa
 900
 aataacccaa atgaatctgt aactgcta atgccctacca attctccttc atgtacaaga
 960
 gagttatctt ggacaccaat ggggttatgtt gttcgacaga cattatctac agaactgtca
 1020
 gcagccccct aaaaatgttac ttctatgata aacttaaaga ccattgcttc atcagcagat
 1080
 cctaaaaatg ttagtatacc atcttctgaa gctttatctt cggatccttc ctacaacaaa
 1140
 gaaaaacaca ttattcatcc taccctaaag tctaaagcat cacaaggtag tgaccttgaa
 1200
 caaaatgaag cctcaagaaa gaataagaaa aagaaagaaa aatctacatc aaaatatgaa
 1260
 gtcctgacag ttcaagagcc tccaaggatt gaagatgccg aggaatttcc caacctggca
 1320
 gttgcatctg aaagaagaga cagaatagag acaccgaaat ttcaatctaa gcagcagcca
 1380
 caggataatt ttaaaaaata tgtaagaag agccagcttc cagtgcagtt ggacttgggg
 1440
 ggcatgctga cagccctgga gaagaagcag cactctcagc atgcaaagca gtcctccaaa
 1500
 ccagtggtag tctcagttgg agcagtgcca gtcctttcca aagaatgtgc ac
 1552

<210> 3730

<211> 422

<212> PRT

<213> Homo sapiens

<400> 3730

Met	Ala	Phe	Gly	Ala	Ser	Thr	Phe	Pro	Pro	Gln	Tyr	Leu	Ser	Ser	Glu
1				5				10					15		
Ile	Thr	Leu	His	Pro	Tyr	Ala	Tyr	Ser	Pro	Tyr	Thr	Leu	Asp	Ser	Thr
			20					25				30			
Gln	Asn	Val	Tyr	Ser	Val	Pro	Gly	Ser	Gln	Tyr	Leu	Tyr	Asn	Gln	Pro

```

      35              40              45
Ser  Cys Tyr Arg Gly Phe Gln Thr Val Lys His Arg Asn Glu Asn Thr
 50              55              60
Cys  Pro Leu Pro Gln Glu Met Lys Ala Leu Phe Lys Lys Lys Thr Tyr
 65              70              75              80
Asp  Glu Lys Lys Thr Tyr Asp Gln Gln Lys Phe Asp Ser Glu Arg Ala
      85              90              95
Asp  Gly Thr Ile Ser Ser Glu Ile Lys Ser Ala Arg Gly Ser His His
      100              105              110
Leu  Ser Ile Tyr Ala Glu Asn Ser Leu Lys Ser Asp Gly Tyr His Lys
      115              120              125
Arg  Thr Asp Arg Lys Ser Arg Ile Ile Ala Lys Asn Val Ser Thr Ser
      130              135              140
Lys  Pro Glu Phe Glu Phe Thr Thr Leu Asp Phe Pro Glu Leu Gln Gly
      145              150              155              160
Ala  Glu Asn Asn Met Ser Glu Ile Gln Lys Gln Pro Lys Trp Gly Pro
      165              170              175
Val  His Ser Val Ser Thr Asp Ile Ser Leu Leu Arg Glu Val Val Lys
      180              185              190
Pro  Ala Ala Val Leu Ser Lys Gly Glu Ile Val Val Lys Asn Asn Pro
      195              200              205
Asn  Glu Ser Val Thr Ala Asn Ala Ala Thr Asn Ser Pro Ser Cys Thr
      210              215              220
Arg  Glu Leu Ser Trp Thr Pro Met Gly Tyr Val Val Arg Gln Thr Leu
      225              230              235              240
Ser  Thr Glu Leu Ser Ala Ala Pro Lys Asn Val Thr Ser Met Ile Asn
      245              250              255
Leu  Lys Thr Ile Ala Ser Ser Ala Asp Pro Lys Asn Val Ser Ile Pro
      260              265              270
Ser  Ser Glu Ala Leu Ser Ser Asp Pro Ser Tyr Asn Lys Glu Lys His
      275              280              285
Ile  Ile His Pro Thr Gln Lys Ser Lys Ala Ser Gln Gly Ser Asp Leu
      290              295              300
Glu  Gln Asn Glu Ala Ser Arg Lys Asn Lys Lys Lys Lys Glu Lys Ser
      305              310              315              320
Thr  Ser Lys Tyr Glu Val Leu Thr Val Gln Glu Pro Pro Arg Ile Glu
      325              330              335
Asp  Ala Glu Glu Phe Pro Asn Leu Ala Val Ala Ser Glu Arg Arg Asp
      340              345              350
Arg  Ile Glu Thr Pro Lys Phe Gln Ser Lys Gln Gln Pro Gln Asp Asn
      355              360              365
Phe  Lys Asn Asn Val Lys Lys Ser Gln Leu Pro Val Gln Leu Asp Leu
      370              375              380
Gly  Gly Met Leu Thr Ala Leu Glu Lys Lys Gln His Ser Gln His Ala
      385              390              395              400
Lys  Gln Ser Ser Lys Pro Val Val Val Ser Val Gly Ala Val Pro Val
      405              410              415
Leu  Ser Lys Glu Cys Ala
      420

```

<210> 3731

<211> 1704

<212> DNA

<213> Homo sapiens

<400> 3731
tacgtgctca gaaacctcta cgtccccaac cggaagggtga agtccctgtg ctgggcctcg
60
ctgaaccagt tggactctca cgttctgctg tgcttcgagg gaatcacaga tgcttcaagc
120
tgtgcagtgc tgctcccagc atcaactgttc gtcaatagtc acccaggaat agaccggcct
180
ggcatgctct gcagtttccg gatccctggg gcctgggcct gtgcctgggc cctgaatata
240
caagcaaata actgcttcag tacaggcttg tctcggcggg tcctgttgac caacgtgggtg
300
acgggacacc ggcatcctt tgggaccaac agtgatgtct tggcccagca gtttgccttc
360
atggctcctc tgctgtttta tggctgccgc tctggggaaa tctttgcat tgatctgcgt
420
tgtggaaatc aaggcaaggg atggaaggcc acccgctgt ttcattgattc agcagtgacc
480
tctgtgcgga tcctccaaga tgagcaatac ctgatggctt cagacatggc tggaaagatc
540
aagctgtggg acctgaggac cacgaagtgc gtaaggcagt acgaaggcca cgtgaatgag
600
tacgcctacc tgcccctgca tgtgcacgag gaagaaggaa tcctgggtggc agtggggccag
660
gactgctaca cgagaatctg gagcctccac gatgcccgcc tactgagaac cataccctcc
720
ccgtaccctg cctccaaggc cgacattccc agtgtggcct tctcgtcgcg gctggggggc
780
tcccggggcg cgcgggggct gctcatggct gtccggcagg acctttactg ttactcctac
840
agctaattct gcagggcaca gcccagagcc atgtggattt gacttacggg agtaaagcgt
900
aactttttac tgcatctaata gaggggtgtt taagtgcacac tcagtgtaca cagatcccat
960
cctctggctg ctaggagaga agtgctgaat gttccgtgtg gagatgctca ggaaagtatt
1020
ttgagttaaa ttgctggctg agagagcttg gaagtccttt tcataaaagg tacctctttc
1080
cttttcttat tgaattctta gaacttagtt aaccctccct gccttttctt aacaaaaagg
1140
acttttctaa ggactgaaga ttggcaaaaa cgaaaagcct ctctctccaa gagccattg
1200
aagaagccca gtgatgagac ggtgagatgg tttgagtctt cgggtgcctgg gtagcaggaa
1260
gaaagacctg catcctgcat ctgtacttgg ggaagccagc ggagaggacg gggaggttac
1320
ttctctaagt ttctgcagaa atattgaagg ctggagtgtg gaatccttaa acttggcctt
1380
ctcaaactca gcagcagatc tccgggatcc tgctgttatt atccaaaggc gttggaagga
1440
aagatggatc ttcttacatg ctagaagttt taaacgggtc ttaacatgcc tttgttcaag
1500
caccttccag aatgtaaggt tcagcagctc tggtttctat tacggtgact tgaatgtcag
1560

attcaagggc ccggcggtcaa aggaaattgg ttttgacttt ttgtaatcta ggagcgacag
 1620
 ttcgtgagat gtttattcag tgttaaagag cctgtttttc taccaaaca taaaaccaag
 1680
 agaagaaaaa aaaaaaaaaa aaaa
 1704

<210> 3732

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3732

Tyr	Val	Leu	Arg	Asn	Leu	Tyr	Val	Pro	Asn	Arg	Lys	Val	Lys	Ser	Leu
1				5					10				15		
Cys	Trp	Ala	Ser	Leu	Asn	Gln	Leu	Asp	Ser	His	Val	Leu	Leu	Cys	Phe
			20					25					30		
Glu	Gly	Ile	Thr	Asp	Ala	Ser	Ser	Cys	Ala	Val	Leu	Leu	Pro	Ala	Ser
		35					40					45			
Leu	Phe	Val	Asn	Ser	His	Pro	Gly	Ile	Asp	Arg	Pro	Gly	Met	Leu	Cys
	50					55					60				
Ser	Phe	Arg	Ile	Pro	Gly	Ala	Trp	Ser	Cys	Ala	Trp	Ser	Leu	Asn	Ile
65					70					75				80	
Gln	Ala	Asn	Asn	Cys	Phe	Ser	Thr	Gly	Leu	Ser	Arg	Arg	Val	Leu	Leu
			85						90					95	
Thr	Asn	Val	Val	Thr	Gly	His	Arg	Gln	Ser	Phe	Gly	Thr	Asn	Ser	Asp
			100					105					110		
Val	Leu	Ala	Gln	Gln	Phe	Ala	Leu	Met	Ala	Pro	Leu	Leu	Phe	Asn	Gly
		115					120					125			
Cys	Arg	Ser	Gly	Glu	Ile	Phe	Ala	Ile	Asp	Leu	Arg	Cys	Gly	Asn	Gln
	130					135					140				
Gly	Lys	Gly	Trp	Lys	Ala	Thr	Arg	Leu	Phe	His	Asp	Ser	Ala	Val	Thr
145				150						155				160	
Ser	Val	Arg	Ile	Leu	Gln	Asp	Glu	Gln	Tyr	Leu	Met	Ala	Ser	Asp	Met
			165					170						175	
Ala	Gly	Lys	Ile	Lys	Leu	Trp	Asp	Leu	Arg	Thr	Thr	Lys	Cys	Val	Arg
		180					185						190		
Gln	Tyr	Glu	Gly	His	Val	Asn	Glu	Tyr	Ala	Tyr	Leu	Pro	Leu	His	Val
	195					200						205			
His	Glu	Glu	Glu	Gly	Ile	Leu	Val	Ala	Val	Gly	Gln	Asp	Cys	Tyr	Thr
	210				215						220				
Arg	Ile	Trp	Ser	Leu	His	Asp	Ala	Arg	Leu	Leu	Arg	Thr	Ile	Pro	Ser
225				230						235				240	
Pro	Tyr	Pro	Ala	Ser	Lys	Ala	Asp	Ile	Pro	Ser	Val	Ala	Phe	Ser	Ser
			245					250					255		
Arg	Leu	Gly	Gly	Ser	Arg	Gly	Ala	Pro	Gly	Leu	Leu	Met	Ala	Val	Gly
		260					265					270			
Gln	Asp	Leu	Tyr	Cys	Tyr	Ser	Tyr	Ser							
	275					280									

<210> 3733

<211> 515

<212> DNA

<213> Homo sapiens

<400> 3733

nngggccgag ctgtccgacg tgtcactgca gggacccgcc cggggtgggt ctggggtctt
 60
 cgctaccgga gagggaggag aagggggagg ttaaagggga aggaccccgg aagtgcctcc
 120
 tcctcagtgc gggagaggga gacgccgggg gcangtccat gcctcccgcg gcgtgggttg
 180
 tgcgtcccgag gtgacgtcag aagcagcccg cccctgcctg gatgggtgag cctgagtgac
 240
 gtcaggagca gaggccggag ctgtccatca gcaccaaagg ccgcggggcg gctcagggca
 300
 tggggcgcg gttctggggc ggcccagacc ccggctcctg cgccttcccc ttcctcaggc
 360
 nccagcccg gttcccgac gccgcgggac tggagtgcc gccggtgttg gacgtggagc
 420
 ggcgcgcga ccgcgcgac accattctct ccggcccagc agcccccttc ctgcacgac
 480
 ggactttccc tggaccccg tcagttggag cctct
 515

<210> 3734

<211> 171

<212> PRT

<213> Homo sapiens

<400> 3734

Xaa	Gly	Arg	Ala	Val	Arg	Arg	Val	Thr	Ala	Gly	Thr	Arg	Pro	Gly	Trp
1				5					10					15	
Val	Ser	Gly	Ser	Arg	Tyr	Arg	Arg	Gly	Arg	Arg	Arg	Gly	Arg	Leu	Lys
			20					25					30		
Gly	Lys	Asp	Pro	Gly	Ser	Ala	Pro	Ser	Ser	Val	Arg	Glu	Arg	Glu	Thr
		35					40				45				
Pro	Gly	Ala	Xaa	Pro	Cys	Leu	Pro	Arg	Arg	Gly	Trp	Cys	Val	Pro	Gly
	50				55					60					
Asp	Val	Arg	Ser	Ser	Pro	Leu	Pro	Gly	Trp	Cys	Ala	Leu	Ser	Asp	
65					70				75				80		
Val	Arg	Ser	Arg	Gly	Arg	Ser	Cys	Pro	Ser	Ala	Pro	Lys	Ala	Ala	Gly
			85					90					95		
Gly	Leu	Arg	Ala	Trp	Gly	Arg	Gly	Ser	Gly	Ala	Ala	Arg	Ala	Pro	Ala
			100				105						110		
Pro	Ala	Pro	Ser	Pro	Ser	Ser	Gly	Xaa	Ser	Pro	Ser	Ser	Arg	Thr	Pro
		115					120					125			
Arg	Asp	Trp	Ser	Ala	Ser	Arg	Cys	Trp	Thr	Trp	Ser	Gly	Ala	Ala	Thr
	130				135						140				
Ala	Pro	Thr	Pro	Phe	Ser	Pro	Ala	Gln	Gln	Pro	Pro	Ser	Ser	His	Asp
145				150					155					160	
Gly	Leu	Ser	Leu	Asp	Pro	Ser	Gln	Leu	Glu	Pro					
			165					170							

<210> 3735

<211> 2512

<212> DNA

<213> Homo sapiens

<400> 3735
ngcaggttct tcggaagget tgtagctcca aaatggatcg ccagagtgtt ctccatgtac
60
tgggcatatt gaaaaactcc aaattttctca aagtctgcct gcctgtttat gtggtaggga
120
tgatcactga acccatccct gacatccgaa accagtatcc agagcacata agcaacatca
180
tctccctcct ccaggacctt gtaagtgtct tccctgccag ctctgtgcag gaaacttcca
240
tgctggtttc cctcctgccca acctctctta atgctctgag agcctctggg gttgacatag
300
aagaggaaac ggagaagaac ctggaaaagg tacagactat cattgaacat ctgcaggaaa
360
agaggcgaga gggcactttg agagtggata cctacactct agtgcagcct gaggcagaag
420
accatgttga gagctaccga accatgccca tttaccctac ctacaatgaa gtgcacttgg
480
atgagaggcc ctctcttcgc cccaatatca tttctggaaa atacgacagc actgctatct
540
atctggatag ccacttccgg ctctctgcag aagatttcgt cagaccttta cgggaaggta
600
ttttggaact tctccaaagc tttgaagacc agggcctgag gaagagaaag tttgatgaca
660
tcgaatcta ctttgacacc aggattatca ccccatgtg ttcacatca ggcatagtct
720
acaagggtgca gtttgacaca aaaccactga agtttgttcg ctggcagaat tccaaacgat
780
tgctctatgg gtctttggta tgcattgtcca aggacaactt cgagacattt ctttttgcca
840
ccgtatctaa caggagagcag gaagatctct gccgaggaat tgtccagctc tgcttcaatg
900
agcaaagcca acagctgcta gcagaggctc agccctctga ctctttcctc atggtagaga
960
caactgcata ctttgaggcc tacaggcacg tcctggaagg actccaggag gtccaggagg
1020
aagatgttcc ctccagagg aatatcgtgg agtgtaactc tcatgtgaag gagccaagg
1080
acttgctaata ggggggcaga tatgacttta ccccttaat agagaatcct tcagccactg
1140
gggaatttct aagaaatgtc gagggtttga gacatcccag aattaatgtc ttagatcctg
1200
gccagtggcc ctcaaaagaa gccctgaagc tggatgactc ccagatggaa gccttgcatg
1260
ttgctctcac aagggaactg gctattatc aaggacctcc tggaacaggc aaaacctatg
1320
tgggtctaaa aattgttcag gccctcctaa ccaacgagtc tgtttggcaa attagcctcc
1380
agaagtcccc catcttggtt gtgtgttata ctaatcatgc tttggaccag tttctggaag
1440
gcactacaaa ttgtcagaag accagcattg tgccgggtggg tggaaggagc aacagtgaag
1500
tcctgaagca gttcacctca agggagctga ggaacaagcg ggaattccgc cgcaacctcc
1560

ccatgcacct ccgaagggcc tacatgagta tcatgacaca gatgaaggag tcagagcaag
 1620
 agcttcatga aggagccaag accctggagt gcaccatgcg tgggtgccta cggaacagt
 1680
 acctgcagaa gtacatctca cccagcact gggaaagtct catgaatgga ccagtgcagg
 1740
 atagtgaatg gatttgcttc cagcactgga agcattccat gatgctggag tggctaggtc
 1800
 ttggtgtcgg ttctttcacg caaagtgttt ctccagcagg acctgagaat acagcccagg
 1860
 cagaagggga tgaggaggaa gaaggggagg aggagagttc gctgatagag atcgagagg
 1920
 aagctgacct gattcaagca gaccgggtga ttgaggagga agaggtggtg aggccccagg
 1980
 ggcggaagaa ggaagagagt ggagcagacc aggagttggc taaaatgctt ctggccatga
 2040
 ggctagacca ttgtggcact gggacagcag ctggacagga gcaagccaca ggagagtggc
 2100
 agacccagcg caaccagaa aaagaaaatg aaaaaagag tgaaggatga gcttcgcaaa
 2160
 ctgaacacca tgcctgcagc cgaggccaac gagatcgagg atgtttggca cctggacctc
 2220
 agttctcgtt ggcagcttta taggctctgg ctacagttgt accaggtga cccccgcc
 2280
 gggaagatcc tcagctatga acgccagtac cgcacatcag cagaaagaat ggccgagctg
 2340
 agactccagg aagacctgca cattcttaaa gatgcccagg ttgtaggaat gacaaccaca
 2400
 ggtgctgcc aataccgcca gatcctacag aaggtggagc cgaggattgt catagtggaa
 2460
 gaagctgcgg aagtccttga ggcccatacc attgccacat tgagcaaagc tt
 2512

<210> 3736

<211> 155

<212> PRT

<213> Homo sapiens

<400> 3736

Thr	Ile	Val	Ala	Leu	Gly	Gln	Gln	Leu	Asp	Arg	Ser	Lys	Pro	Gln	Glu
1				5					10					15	
Ser	Gly	Arg	Pro	Ser	Ala	Thr	Gln	Lys	Lys	Lys	Met	Lys	Lys	Arg	Val
			20					25					30		
Lys	Asp	Glu	Leu	Arg	Lys	Leu	Asn	Thr	Met	Pro	Ala	Ala	Glu	Ala	Asn
		35					40					45			
Glu	Ile	Glu	Asp	Val	Trp	His	Leu	Asp	Leu	Ser	Ser	Arg	Trp	Gln	Leu
	50					55					60				
Tyr	Arg	Leu	Trp	Leu	Gln	Leu	Tyr	Gln	Ala	Asp	Thr	Pro	Pro	Gly	Lys
65					70				75					80	
Ile	Leu	Ser	Tyr	Glu	Arg	Gln	Tyr	Arg	Thr	Ser	Ala	Glu	Arg	Met	Ala
				85				90					95		
Glu	Leu	Arg	Leu	Gln	Glu	Asp	Leu	His	Ile	Leu	Lys	Asp	Ala	Gln	Val
			100					105					110		
Val	Gly	Met	Thr	Thr	Thr	Gly	Ala	Ala	Lys	Tyr	Arg	Gln	Ile	Leu	Gln

	115		120		125										
Lys	Val	Glu	Pro	Arg	Ile	Val	Ile	Val	Glu	Glu	Ala	Ala	Glu	Val	Leu
	130				135						140				
Glu	Ala	His	Thr	Ile	Ala	Thr	Leu	Ser	Lys	Ala					
145					150					155					

<210> 3737

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3737

```

ngtgcctgtgg ctgcaggctg gcaggtggca gccccatgcc caggtgcctg cgtatgctac
60
aatgagccca aggtgacgac aagctgcccc cagcagggcc tgcaggctgt gcccgtagggc
120
atccctgctg ccagccagcg catcttctctg cacggcaacc gcattctcgca tgtgccagct
180
gccagcttcc gtgcctgccc caacctcacc atcctgtggc tgcactcgaa tgtgctggcc
240
cgaattgatg cggctgcctt cactggcctg gccctcctgg gagcactgga cctcagcgat
300
aatgcacagc tccggtctgt ggacctgcc acattccacg gcctggggccg cctacacacg
360
ctgcacctgg accgctgccc cctgcaggag ctggggcccgg ggtgtgtccg cggcctggct
420
gccctgcagt acctctacct gcaggacaac gcgctgcagg cactgcctga tgacaccttc
480
cgcgacctgg gcaacctcac acacctcttc ctgcacggca accgcatctc cagcgtgccc
540
gagcgcgcct tccgtgggct gcacagcctc gacctctctc tactgcacca gaaccgcgtg
600
gccccatgtc acccgcatgc ctccgtgac cttggccgcc tcatgacact ctatctgttt
660
gccaacaatc tatcagcgct gccactgag gccctggccc cctgcgtgc cctgcagtac
720
ctgaggctca acgacaaccc ctgggtgtgt gactgccggg cagcggcact ctgggcctgg
780
ctgcagaagt tccgcggctc ctctccgag gtgcctgca gcctcccga acgcctggct
840
ggccgtgacc tcaaacgcct agctgccaat gacctgcagg gctgcgctgt ggccaccggc
900
ccttaccatc ccatctggac cggcagggcc accgatgagg agccgctggg gcttcccaag
960
tgctgccagc cagatgccgc tgacaaggcc tcagtactgg agcctggaag accagcttcg
1020
gcaggcaatg cgctgaaggg acgcgt
1046

```

<210> 3738

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3738

```

Xaa Ala Val Ala Ala Gly Trp Gln Val Ala Ala Pro Cys Pro Gly Ala
 1           5           10           15
Cys Val Cys Tyr Asn Glu Pro Lys Val Thr Thr Ser Cys Pro Gln Gln
      20           25           30
Gly Leu Gln Ala Val Pro Val Gly Ile Pro Ala Ala Ser Gln Arg Ile
      35           40           45
Phe Leu His Gly Asn Arg Ile Ser His Val Pro Ala Ala Ser Phe Arg
      50           55           60
Ala Cys Arg Asn Leu Thr Ile Leu Trp Leu His Ser Asn Val Leu Ala
65           70           75           80
Arg Ile Asp Ala Ala Ala Phe Thr Gly Leu Ala Leu Leu Gly Ala Leu
      85           90           95
Asp Leu Ser Asp Asn Ala Gln Leu Arg Ser Val Asp Pro Ala Thr Phe
      100          105          110
His Gly Leu Gly Arg Leu His Thr Leu His Leu Asp Arg Cys Gly Leu
      115          120          125
Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu Ala Ala Leu Gln Tyr
      130          135          140
Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu Pro Asp Asp Thr Phe
145          150          155          160
Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu His Gly Asn Arg Ile
      165          170          175
Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu His Ser Leu Asp Arg
      180          185          190
Leu Leu Leu His Gln Asn Arg Val Ala His Val His Pro His Ala Phe
      195          200          205
Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu Phe Ala Asn Asn Leu
      210          215          220
Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu Arg Ala Leu Gln Tyr
225          230          235          240
Leu Arg Leu Asn Asp Asn Pro Trp Val Cys Asp Cys Arg Ala Arg Pro
      245          250          255
Leu Trp Ala Trp Leu Gln Lys Phe Arg Gly Ser Ser Ser Glu Val Pro
      260          265          270
Cys Ser Leu Pro Gln Arg Leu Ala Gly Arg Asp Leu Lys Arg Leu Ala
      275          280          285
Ala Asn Asp Leu Gln Gly Cys Ala Val Ala Thr Gly Pro Tyr His Pro
      290          295          300
Ile Trp Thr Gly Arg Ala Thr Asp Glu Glu Pro Leu Gly Leu Pro Lys
305          310          315          320
Cys Cys Gln Pro Asp Ala Ala Asp Lys Ala Ser Val Leu Glu Pro Gly
      325          330          335
Arg Pro Ala Ser Ala Gly Asn Ala Leu Lys Gly Arg
      340          345

```

<210> 3739

<211> 1252

<212> DNA

<213> Homo sapiens

<400> 3739

```

tcataccttat cttcgtcatt ttctgggctg agcttttttg acaaggtgct gtgccagtct
60

```

acacccctca gccagctggt cttggaggtc ctgcccctgg gacttgtccg gtcacatccag
 120
 agtgaggagg gcctggagat gctcattcaa tgagcgggag gcacctctcc cttcccgtaa
 180
 cttctccctt aactgggtca gctctcggtc ctgagagtga accaggactt tatattgctg
 240
 tattttcttct gtcgggtggc caggaagccg gccagttgag ttagaaaaca tctctctttg
 300
 aggtttctga actgctgttt gttctctgcc aactgggggc gcaatttctc gttgatttct
 360
 agaatgttca tctctgcctt ctgctgggac aaagggcccg ctgataccac catgctgacg
 420
 tttgtggcag aagaggtgga gtcagggact tactgttgtg aaaaatgtga tcactcccca
 480
 cagcacttta ggatccttca ccacaaaac aaggttcgag gtgcctcaac tcagagctga
 540
 aagcactgcc agtagctcag actctgataa gaggtaggta gattgtggcc agcgtgccag
 600
 gtaaccgtct tgatccatag gctcacattt gatcccaact ggcggctgct tcttggcatt
 660
 aactttggat tcccaaccag taaatcttag caagatctga gtttctccag gtatgatatt
 720
 attttgtttg accatcctta tcttcaaggg ctgttggtac tggcagctct tgatgtcagc
 780
 ccacaccatg tgaggctgct cttggtgcac cgaatgggga agtttctaca tcagggcctc
 840
 ggagaatcca ctggaagccc tggacagtgg gaggcagcgg cacccccagt gtggaggcca
 900
 agagcacaca gcactgaagc tccaggacac cctcaggagg acggcaaggg acaattggct
 960
 ggtgagagcc cgggtcaccc ggaaccttcg cctgggtcta aacaggattt gccttcagat
 1020
 tgcctcagaa acgctgggtg gacttcgcgt aacttcccat tcacagggca gccggcagcc
 1080
 gcgcccgcgc gcctcgcccc agctcctggc gccgcagatc gcccgccccg cgttcccaaa
 1140
 agccccgcgc tcgctcagaa gctcgggcag cctcgcgacc ctcacctacc cctcccaata
 1200
 tcgcccgtgt ctcaaccgcc gccacgcca tagcctgcgg ccagctggat cc
 1252

<210> 3740

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3740

Met Gly Lys Phe Leu His Gln Gly Leu Gly Glu Ser Thr Gly Ser Pro
 1 5 10 15
 Gly Gln Trp Glu Ser Ala Ala Pro Pro Val Trp Arg Pro Arg Ala His
 20 25 30
 Ser Thr Glu Ala Pro Gly His Pro Gln Glu Asp Gly Lys Gly Gln Leu
 35 40 45
 Ala Gly Glu Ser Pro Gly His Arg Glu Pro Ser Pro Gly Ser Lys Gln

```

      50              55              60
Asp Leu Pro Ser Asp Cys Leu Arg Asn Ala Gly Trp Thr Ser Arg Asn
65              70              75              80
Phe Pro Phe Thr Gly Gln Pro Ala Ala Ala Pro Pro Arg Leu Gly Pro
      85              90              95
Ala Pro Gly Ala Ala Asp Arg Pro Ser Arg Val Pro Lys Ser Pro Ala
      100              105              110
Leu Ala Gln Lys Leu Gly Gln Pro Arg Asp Pro His Leu Pro Leu Pro
      115              120              125
Ile Ser Pro Leu Ser Gln Pro Pro Pro Ser Pro
      130              135

```

<210> 3741

<211> 562

<212> DNA

<213> Homo sapiens

<400> 3741

```

cagacagcaa gcgacggccc agctcctcaa ggccacctcc gacctcggcg gggtaggggca
60
gtcgtgtcca ctgtggggat ccacgtcctg actaaccttg tgttcctaga aatccctcac
120
cggcagatcg gtgcctcctg aatcccaccc aaaattccca ctgggaatgt gttcctgaaa
180
gagctgcccc ggcttgagaa agcctctttt cagaccaaac ttcgtattca aagctcaaaa
240
agaactgcac acaattagga cagtcataca agatgctgcc cctaactctg ccacaatctg
300
cgagaaggga ggcggggcct cagagggcaa agtgcccctg ggaagggatc cgcagggaac
360
agctttgaaa ggaccacagc cccagccac gaggggagca agcacgagcc ggggagagag
420
ctctgcgctc gcacacggga ttcattctcg ccgctctgc ccgtttccag caacacggag
480
ccaggcggaa acagtttctc cagccattc gcctccccga ctcttctct caggcacgg
540
ctgggctgct ttcattcacg gt
562

```

<210> 3742

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3742

```

Met Gly Trp Arg Asn Cys Phe Arg Leu Ala Pro Cys Cys Trp Lys Arg
1              5              10              15
Ala Glu Ala Ala Glu Met Asn Pro Val Cys Glu Arg Arg Ala Leu Ser
      20              25              30
Pro Ala Arg Ala Cys Ser Pro Arg Gly Trp Gly Leu Trp Ser Phe Gln
      35              40              45
Ser Cys Ser Leu Arg Ile Pro Ser Gln Gly His Phe Ala Leu Gly Ser
      50              55              60
Pro Ala Ser Leu Leu Ala Asp Cys Gly Arg Ile Arg Gly Ser Ile Leu

```


115 120 125
Arg Thr Val Phe Val Phe
130

<210> 3745
<211> 345
<212> DNA
<213> Homo sapiens

<400> 3745
acgcgtcgaa agggaagagc agaggacgct ggctctcatg gcaggatggt gtgtgtacgg
60
gacgctgtgg gagaggaaaa cagccacatg tgggctggct gcttggagga gacacatgag
120
ccgtgaacac gtctcccccg gccgtccct ggttccatgc gtgctcgtct tgggcaccac
180
gagaacacag ccatgcagcc cccgatcctg cagccacagc cacggcatcg cctggtcgga
240
tgcagcatct gctccggacg cctctcgtcg tcgggtgccag gcctgccagg ccaagccccg
300
attctcaggg gcggcaggag gtgggaggca cgtttgggcg gatcc
345

<210> 3746
<211> 102
<212> PRT
<213> Homo sapiens

<400> 3746
Met Ala Gly Trp Cys Val Tyr Gly Thr Leu Trp Glu Arg Lys Thr Ala
1 5 10 15
Thr Cys Gly Leu Ala Ala Trp Arg Arg His Met Ser Arg Glu His Val
20 25 30
Ser Pro Gly Arg Ser Leu Val Pro Cys Val Leu Val Leu Gly Thr Thr
35 40 45
Arg Thr Gln Pro Cys Ser Pro Arg Ser Cys Ser His Ser His Gly Ile
50 55 60
Ala Trp Ser Asp Ala Ala Ser Ala Pro Asp Ala Ser Arg Cys Arg Cys
65 70 75 80
Gln Ala Cys Gln Ala Lys Pro Arg Phe Ser Gly Ala Ala Gly Gly Gly
85 90 95
Arg His Val Trp Ala Asp
100

<210> 3747
<211> 800
<212> DNA
<213> Homo sapiens

<400> 3747
cctaggcgag gcgctggcgc tggggtctgg ctggcgatcat gcgtgccacg ctctctctta
60
cgcgccggac cctgggatgc tcttcggccg cateccgctg cgctacgcca tactgggtgag
120

aagggggcgc gcccgccac tttctgcctg agccccgcac cctctctggg ggtctcctct
180
ggggcgcccc tgccaatccc cgttccccc tccegcagat gcagatgcgc ttcgatggac
240
gcttggtt ccccgcgga ttcgtggaca cgcaggacag aagcctagag gacgggctga
300
accgcgagct gcgcgaggag ctgggcgaag cggctgcgc tttccgcgtg gagcgactg
360
actaccgag ctcccacgtc ggggtcaggg ccacgcgttg tggcccactt ctatgccaa
420
cgtctgacgc tcgaggagct gttggctgtg gaggcggcg caacacgcgc caaggaccac
480
gggctggagg tgggaccagc ctgggactct gtccctttcc caatttctc ttctcccaa
540
gctttctctc ccccaagaaa gcatccctgg agaaaagtct ttgcccctct gaccttgccc
600
tctcccagc tttcttggtg gagttggat cgtgatcatc tatactctga attagtactg
660
ccaacctggg cttctgttaa aggtctttcc caccctttac caggagagat cctttctaga
720
acacactcat ccatgtctct ctgctgttcc ctattgacag tgtgatagat tatcacatta
780
tctaggtgtg gcaacctagg
800

<210> 3748

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3748

Met	Gln	Met	Arg	Phe	Asp	Gly	Arg	Leu	Gly	Phe	Pro	Gly	Gly	Phe	Val
1				5					10					15	
Asp	Thr	Gln	Asp	Arg	Ser	Leu	Glu	Asp	Gly	Leu	Asn	Arg	Glu	Leu	Arg
		20						25					30		
Glu	Glu	Leu	Gly	Glu	Ala	Ala	Ala	Ala	Phe	Arg	Val	Glu	Arg	Thr	Asp
		35					40					45			
Tyr	Arg	Ser	Ser	His	Val	Gly	Val	Arg	Ala	Thr	Arg	Cys	Gly	Pro	Leu
	50					55					60				
Leu	Cys	Gln	Ala	Ser	Asp	Ala	Arg	Gly	Ala	Val	Gly	Cys	Gly	Gly	Arg
65					70				75					80	
Arg	Asn	Thr	Arg	Gln	Gly	Pro	Arg	Ala	Gly	Gly	Gly	Thr	Ser	Leu	Gly
			85					90						95	
Leu	Cys	Pro	Phe	Pro	Asn	Phe	Leu	Phe	Ser	Gln	Ser	Phe	Leu	Ser	Pro
		100						105					110		
Lys	Lys	Ala	Ser	Leu	Glu	Lys	Ser	Leu	Cys	Pro	Ser	Asp	Leu	Ala	Leu
		115					120					125			
Ser	Pro	Ala	Phe	Leu	Val	Glu	Leu	Gly	Ser						
		130					135								

<210> 3749

<211> 648

<212> DNA

<213> Homo sapiens

<400> 3749

cgcgccccct gggaggatcc tgccaagtgg gtgatggaca catatccatg ggcagccagc
 60
 ccacaacagc acgagtggcc tccccctgctg cagttacggc ctgaggatgt cggcttcgac
 120
 ggctactcca tgctcggga gggatcgaca agcaagcaga tgccccccag tgatgctgaa
 180
 ggtgaccgc tgatgaacat gctgatgagg ctgcaggagg cagccaacta ctccagcccc
 240
 cagagctatg acagcgactc caacagcaac agccatcacg atgacatctt ggactcctct
 300
 ttggagtcca ctctgtgaca gggggccgga gccacgcgc ctctcttctt cctcaccgca
 360
 ttccacctgc atccccaca tcacctgaa gatgacttcc tgagccagcc cccagccaca
 420
 gccttagagc tgcgggaaca ccgagacccc ccgtccttca gcctcgacct ggggtgcaggc
 480
 atccccggcc agctgcctgc ggaccgcttc cttccacagc gagaactgca ctacctctg
 540
 ttgtacttta attattgttt tgcttgttg ctgtgacctc cctaagacac tgaagatact
 600
 tctcgggaaa ggatcatcgc cgttgaaatg aaaaaaaaaa aaaaaaaaa
 648

<210> 3750

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3750

Arg	Ala	Pro	Trp	Glu	Asp	Pro	Ala	Lys	Trp	Val	Met	Asp	Thr	Tyr	Pro
1				5					10					15	
Trp	Ala	Ala	Ser	Pro	Gln	Gln	His	Glu	Trp	Pro	Pro	Leu	Leu	Gln	Leu
			20					25					30		
Arg	Pro	Glu	Asp	Val	Gly	Phe	Asp	Gly	Tyr	Ser	Met	Pro	Arg	Glu	Gly
		35					40				45				
Ser	Thr	Ser	Lys	Gln	Met	Pro	Pro	Ser	Asp	Ala	Glu	Gly	Asp	Pro	Leu
	50					55					60				
Met	Asn	Met	Leu	Met	Arg	Leu	Gln	Glu	Ala	Ala	Asn	Tyr	Ser	Ser	Pro
65					70				75					80	
Gln	Ser	Tyr	Asp	Ser	Asp	Ser	Asn	Ser	Asn	Ser	His	His	Asp	Asp	Ile
			85					90						95	
Leu	Asp	Ser	Ser	Leu	Glu	Ser	Thr	Leu							
			100					105							

<210> 3751

<211> 554

<212> DNA

<213> Homo sapiens

<400> 3751

gcgcgcctgt ctgcctcgc acgtgcgctg gcaggggccgc cgcctcgccc tcaccatgga
 60

cctggccccg ctgctgctcg cggctcggtc gccccgagcg gggccaaggg cgtttcctac
 120
 acgcagggcc agagtccgga gccgcggacc cgcgaggtat ttctactacg tggaccacca
 180
 gggccagctt ttctggatg attccaaaat gaagaatttc atcacctgct tcaaagaccc
 240
 gcagttcctg gtcaccttct tctcccgct gagaccaac cgcagcgggc gctacgaggc
 300
 cgttttcccc ttctctcgc cctgcggcag agagcgcaac ttctgcgct gcgaggaccg
 360
 gccggtggtc ttcacgcacc tgctgaccgc ggaccacggg cctccgcgc tctcctactg
 420
 cggcgggtggc gaggccctgg ccgtgccctt cgagccggcg cgcctgctgc ccctggccgc
 480
 caacggggcg ctgtaccacc cggcgccgga gcgtgcgggc ggcgtgggccc tgggtgcgcc
 540
 ttccgccctg gccc
 554

<210> 3752

<211> 66

<212> PRT

<213> Homo sapiens

<400> 3752

Ala	Arg	Leu	Ser	Ala	Leu	Ala	Arg	Ala	Leu	Ala	Gly	Pro	Pro	Pro	Arg
1				5				10				15			
Pro	His	His	Gly	Pro	Gly	Pro	Ala	Ala	Ala	Arg	Gly	Ser	Val	Ala	Pro
			20				25					30			
Ser	Gly	Ala	Lys	Gly	Val	Ser	Tyr	Thr	Gln	Gly	Gln	Ser	Pro	Glu	Pro
		35				40					45				
Arg	Thr	Arg	Glu	Val	Phe	Leu	Arg	Gly	Pro	Pro	Gly	Pro	Ala	Phe	
	50				55						60				
Pro	Gly														
65															

<210> 3753

<211> 1426

<212> DNA

<213> Homo sapiens

<400> 3753

nnaattcggg acaggtgcag tacttgctct aactttgccg cagctgcctc ctttctctcg
 60
 gaaccactc tcctaacca cccccgagag gcggagagaa tgtgggagca cttcagagag
 120
 gcctaggctc cggagatcgg gccatctggg ctctgaaagc aaattagttt tccaactcat
 180
 gtctggctcc ggcgttacc agacgcctgg aaggtccttc ctgcagtctg atcaccattt
 240
 ttctgctgc actgaccaat cagctccctc tggccttcaa cctcggaat gatggattag
 300
 gggagtctag aaatggacga agccctagaa acgcagctga agacgagcag aggacgcttc
 360

tcggctacag aatccctccc caccttgag ctcttatctc aggtggacat ggactgcagg
 420
 gtccacatgc gacccatcgg cctgacgtgg gtgctgcaac tgacctggc atggatcctg
 480
 ctagaagcct gtggaggag cgcgccactc caagccaggt cccagcaaca ccatgggctg
 540
 gcagctgac tgggcaaagg caagctgcac ctggcaggac cttgtgtcc ctcagagatg
 600
 gacacaacag agacatcggg ccttggaac catccagaac gctgtggagt gccgagccct
 660
 gaatgcgaat ccttcctgga acacctccaa cgtgcccttc gcagtcgctt ccgcctcggg
 720
 ctattggggg tacgccaggc acagccgctc tgcgaggagc tctgccaggc ctgggtcggc
 780
 aactgcgaag atgatatcac ctgcggcccg acttggtcc cactctcaga aaaaaggggc
 840
 tgtgagccca gctgccttac ctatggacag accttcgag acgggacgga cctttgtcgc
 900
 tcggctctgg gccacgcct accggtggct gctcctggag cccgtcactg cttcaacatc
 960
 tccatctcgg cggtagctcg tcccagacca ggacgacggg gccgggaagc tccctcccg
 1020
 cyttcccga gccctgcac ctccatcctg gacgctgcgg gcagcgggag tggcagtggg
 1080
 agcggcagcg gccctagcg gacgcgtggc cctgagttgg gggagcgacc cttccccag
 1140
 ccccgccct caggacacc agaaccac cctcgtcct ctcggccttc tgtaatagtt
 1200
 ttgagatgtc tgccctcct ccttgagct ccagagacc acccctctcc aggttatccc
 1260
 agaaatgacc caactctctc acttttcct ctccttttg aataaagtcg ccagctaaaa
 1320
 aaaaagtcca tgtccacctg agataagagc tggtggctgg attgggggt ccacatgcga
 1380
 cccatcgccc tgacgtgggt gctgcaactg acctcgcat ggatcc
 1426

<210> 3754

<211> 261

<212> PRT

<213> Homo sapiens

<400> 3754

Met	Asp	Glu	Ala	Leu	Glu	Thr	Gln	Leu	Lys	Thr	Ser	Arg	Gly	Arg	Phe
1				5					10					15	
Ser	Ala	Thr	Glu	Ser	Leu	Pro	Thr	Leu	Glu	Leu	Leu	Ser	Gln	Val	Asp
			20						25				30		
Met	Asp	Cys	Arg	Val	His	Met	Arg	Pro	Ile	Gly	Leu	Thr	Trp	Val	Leu
		35					40					45			
Gln	Leu	Thr	Leu	Ala	Trp	Ile	Leu	Leu	Glu	Ala	Cys	Gly	Gly	Ser	Arg
	50					55					60				
Pro	Leu	Gln	Ala	Arg	Ser	Gln	Gln	His	His	Gly	Leu	Ala	Ala	Asp	Leu
65					70					75				80	
Gly	Lys	Gly	Lys	Leu	His	Leu	Ala	Gly	Pro	Cys	Cys	Pro	Ser	Glu	Met

```

      85              90              95
Asp Thr Thr Glu Thr Ser Gly Pro Gly Asn His Pro Glu Arg Cys Gly
      100              105              110
Val Pro Ser Pro Glu Cys Glu Ser Phe Leu Glu His Leu Gln Arg Ala
      115              120              125
Leu Arg Ser Arg Phe Arg Leu Arg Leu Leu Gly Val Arg Gln Ala Gln
      130              135              140
Pro Leu Cys Glu Glu Leu Cys Gln Ala Trp Phe Ala Asn Cys Glu Asp
      145              150              155              160
Asp Ile Thr Cys Gly Pro Thr Trp Leu Pro Leu Ser Glu Lys Arg Gly
      165              170              175
Cys Glu Pro Ser Cys Leu Thr Tyr Gly Gln Thr Phe Ala Asp Gly Thr
      180              185              190
Asp Leu Cys Arg Ser Ala Leu Gly His Ala Leu Pro Val Ala Ala Pro
      195              200              205
Gly Ala Arg His Cys Phe Asn Ile Ser Ile Ser Ala Val Pro Arg Pro
      210              215              220
Arg Pro Gly Arg Arg Gly Arg Glu Ala Pro Ser Arg Arg Ser Arg Ser
      225              230              235              240
Pro Arg Thr Ser Ile Leu Asp Ala Ala Gly Ser Gly Ser Gly Ser Gly
      245              250              255
Ser Gly Ser Gly Pro
      260

```

<210> 3755

<211> 3149

<212> DNA

<213> Homo sapiens

<400> 3755

```

atgaatctct gttccaaatg ctttgctgat tttcaaaaga aacagccaga cgatgattcc
60
gctccaagta caagtaacag ccaatcagat ttgttttccg aagagaccac cagtgacaac
120
aacaatacct cgataaccac gccaaactctt agtcccagcc agcagccgct tccgacagaa
180
ctgaatgtaa cttcaccgag taaagaggag tgtgggcat gcacagacac agctcatgtc
240
tcattaatca caccaacaaa aagatcctgt ggtacagatt cacagtctga gaatgaggct
300
tcaccagtaa aacggccacg actacttgag aatacgggaac ggtccgagga aaccagtcga
360
tctaaacaga agagtcgacg tcggtgcttc cagtgcctaaa ccaaactgga gctggtgcag
420
caggaattgg gatcgtgtcg ctgcggttat gtgttctgta tggtacatcg cctccccgag
480
cagcagcact gcacattcga ccacatgggc cgtggccggg aggaagccat catgaaaatg
540
gtgaagctgg accggaagt ggggcgctcc tgccagcgca tcggggaggg gtgctcctga
600
aggccaggca tgccaccac gtgacgtgtt tcttagttca ctaatgttag ccttatttag
660
gacaaagtca gccagacacc ttgtactggg cagcgtcag actgcagcca gtccgtttcc
720

```

tttcttttagc cagccatcct ggtactgtag tttaggggtt gatggtggtt gaaattgatt
780
tctggctggt tactaagggtg cctgctagcc attgtataaa attaaaacat gaagaatatt
840
ttttttttga gcatggctag tggatttaaa acaacacata cctgtcactg ctggagtcaa
900
acttataaaa agccttaagt ggaaagtgtt ccagacggag actctgagtt aatagaggag
960
tagaagctgg tgttaaagtt cccacgacgc acatggcttt gccagaaact ctgtttaatg
1020
atcgcccttt cacctcttca cttatcctta gtcccagtag ccaggatacc tgatggccac
1080
gtgtgccttg gccacgggag gctgctgaga ttggccacgt ggctgggctg ggtggtggcc
1140
tcaactctcc acagagctgg aaatgggggg tgggggacag attcttacgg aaattttttt
1200
acctgacttg ctatgaaaaa actcatcaca caagaagaga aacagtaacc tcactttgaa
1260
aattagctcc actcaagact agtccacgaa cgagacccgc cttttctaca caggatccaa
1320
ggtcacgaga agcagccaga gtgccccgc tccgccggt ctggtctgcc attcgccagt
1380
gcagggatct ggcacggacc agatgtggcg aatggcagca cagcgcggtg gctgggtctg
1440
cacactggcc tctgcagcca gatttctata ttgggagttt tttaaaaaga catttcatag
1500
ccaacaagaa tcagtagaag tgctgggagc agcagctggg gaagctgccg cccacgggct
1560
ctgccccttc cagctggagc cgcccgctgc tccaggggcc aagaggatga tgcctgggcc
1620
tccattctcg tttctatgca gcccctagct ccaaggacac ccagtcaca tctaccatat
1680
agcaagttta gtaagggaag gcagcatagc tcccagggac agtgggtttg gatctgtcta
1740
gaacacgctt ttgtggctgt ggcccagctc cgagagtgat atttgctctg gtaggtgagg
1800
gcctgagggt acatttctcc acctgtgccc cctcatgttc acagaggatt tcagcagctg
1860
caactgcgca cgccagggtg ggaaggggtg ggggtggcct ggttgcccca tgttaggaaa
1920
tcactaccag tcaggtgggg ctggggctgg gtggacagga tcaggattcc cttgaaagcc
1980
caggcagggt gagcagctcc agtggctcta gtgccgcatc agatccaggt gggtaggggc
2040
aggaggcccc tgcggaggca gcgtggatct gccacacat aggctactgg aatagtttaa
2100
cccagcaact ttctttttta taaaacaaca aatgggtcaa ctctgtctgc aaattaacag
2160
ctgaacacct gcaactgcaa atgttttttg atccgacgta ctgaaatagg aagtcagtct
2220
cttcccacc tccaccacc agagtggaa cgcctgcaaa atccccagcc ttaattcttg
2280
cttcaggacc cagaccggtg tcttgcctta gggcaacca gggcagagg gccaggctctg
2340

cccagcgttt accactgctg tcaagccaca gcccttggcc accatacggg ccatcctcag
 2400
 tgaggcagcc ccccataggc ttccgccaaag ctctgggtccc gaagaggctg tgcgagccct
 2460
 tcccgccctt cccaggggcc ccccgccccc tctctgcctt gctgcgtgga ggcagccatg
 2520
 ggaaggagcc caggggagct ggcctggggg agcgaagccc atgttcgctt cctgacttag
 2580
 agctgggggg ggtggggggg ggggcttgtt cccctgcagt atctgttctg tgaagtttgt
 2640
 taaatgtaag gaaagcttaa attcttgtat ctttaaaga gaaaatctta tttaaccctt
 2700
 ttgtgttcta gatttactta cacacatagc ctagagctca gttttagttt taacattgtg
 2760
 aaaaatttaa aagaatcttg taactttatt ctttttctc ctgctgaaaa aaaaaattaa
 2820
 accaatcgta tgaaagtttg gttttcttgt ttcacccctt ctctaagtg cccctgggt
 2880
 tgctgggaaa actgacccat ctccctggcc agggctggaa agagatgggg gcctgtgtgc
 2940
 agagaccgtc tgcagtactt ggaggcactc gtccagttag tgtccaggct aaacagccgc
 3000
 ttccttgctt tctgttggga gcctctgccc tgggaagctg cgggactggc cttggggtaa
 3060
 aggtgggtct gcagggccaa gcctgtgcc a gcagccagga ggttacacac tgggggggat
 3120
 cagaaaaacga gccccagccc tgaggggccc
 3149

<210> 3756

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3756

Met	Asn	Leu	Cys	Ser	Lys	Cys	Phe	Ala	Asp	Phe	Gln	Lys	Lys	Gln	Pro
1			5						10					15	
Asp	Asp	Asp	Ser	Ala	Pro	Ser	Thr	Ser	Asn	Ser	Gln	Ser	Asp	Leu	Phe
			20					25					30		
Ser	Glu	Glu	Thr	Thr	Ser	Asp	Asn	Asn	Asn	Thr	Ser	Ile	Thr	Thr	Pro
			35				40					45			
Thr	Leu	Ser	Pro	Ser	Gln	Gln	Pro	Leu	Pro	Thr	Glu	Leu	Asn	Val	Thr
			50			55					60				
Ser	Pro	Ser	Lys	Glu	Glu	Cys	Gly	Pro	Cys	Thr	Asp	Thr	Ala	His	Val
65					70					75				80	
Ser	Leu	Ile	Thr	Pro	Thr	Lys	Arg	Ser	Cys	Gly	Thr	Asp	Ser	Gln	Ser
			85					90					95		
Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu	Asn	Thr
			100				105						110		
Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg	Arg	Arg
			115				120					125			
Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu	Leu	Gly
			130			135					140				
Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu	Pro	Glu

145		150		155		160									
Gln	His	Asp	Cys	Thr	Phe	Asp	His	Met	Gly	Arg	Gly	Arg	Glu	Glu	Ala
			165						170					175	
Ile	Met	Lys	Met	Val	Lys	Leu	Asp	Arg	Lys	Val	Gly	Arg	Ser	Cys	Gln
			180					185					190		
Arg	Ile	Gly	Glu	Gly	Cys	Ser									
			195												

<210> 3757

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3757

```

nnaacgcgtag cctcgccggg aagccaggcg tcgttcctcc ggtccatctc gtcctgctc
60
aggcggtg ccaccagca gcgcggcgcc gtgttcgtgg acaaggagaa cctcaccatg
120
ccgggcctca ggttcgacaa catccaggga gatgcagtta aagacttgat gcttcgcttt
180
ctgggtgaaa aagctgcagc aaagagacaa gtcctaaatg ccgactcagt ggaacaatct
240
tttgttgat tgaacagct aatccgttga caaatggcat gccctccgt gccgtcagca
300
cactgacctt gtcaccatta ctaacggctg gctggcgctg cttccagcaa gagctgcaga
360
aactggaggg cagcagtga cctgtgcgga cgtctctca cagcccacgg ccagggtac
420
ggcaagagcg ggctgtcac cagccacacg acagattcac tgcagctctg gtttgcagg
480
ctggcactac tagtgaagtt gggccttttc cagaatgctg agatggaatt tgaacccttc
540
ggaaaatctt atcagccaga tctttattcc gagtactacc cgcacgtgta ccctgggcgc
600
aggggctcca tgggtccctt ctgatgcgc atcttgcaag cggagcttca gcagtacctg
660
gggaaccac aggagtcgt ggatagactg cacaaggta agactgtctg cagcaaggta
720
ggtggcgctg tcattcttcc ctgccacggg gagaacatgc cctccacgcc ctccccacag
780
gacatgcccg tgctgttccc tgcccgtcct gcccacatgca ccacgctgc ttctgccttc
840
agaaggctag gtgaccacag tttgtgtggc ctggtagtcg tggctcttgc tgaatcttt
900
tttagggatg gtaagagttt ctagcagagc ttgagtcctg taattcttac tgctggtac
960
tatgggaagc tgaaggcag agacatcttt cttgccaaag ctgccagctg aagcttcaag
1020
gtcagtgtgc cagccccccc tgggtgt
1046

```

<210> 3758

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3758

Arg Leu Ala Gly Ala Ala Ser Ser Lys Ser Cys Arg Asn Trp Arg Ala
 1 5 10 15
 Ala Val Asp Leu Cys Gly Arg Leu Leu Thr Ala His Gly Gln Gly Tyr
 20 25 30
 Gly Lys Ser Gly Leu Leu Thr Ser His Thr Thr Asp Ser Leu Gln Leu
 35 40 45
 Trp Phe Val Arg Leu Ala Leu Leu Val Lys Leu Gly Leu Phe Gln Asn
 50 55 60
 Ala Glu Met Glu Phe Glu Pro Phe Gly Asn Leu Asp Gln Pro Asp Leu
 65 70 75 80
 Tyr Ser Glu Tyr Tyr Pro His Val Tyr Pro Gly Arg Arg Gly Ser Met
 85 90 95
 Val Pro Phe Ser Met Arg Ile Leu His Ala Glu Leu Gln Gln Tyr Leu
 100 105 110
 Gly Asn Pro Gln Glu Ser Leu Asp Arg Leu His Lys Val Lys Thr Val
 115 120 125
 Cys Ser Lys Val Gly Gly Ala Val Ile Leu Pro Cys His Gly Glu Asn
 130 135 140
 Met Pro Ser Thr Pro Ser Pro Gln Asp Met Pro Val Leu Phe Pro Ala
 145 150 155 160
 Arg Pro Ala Pro Cys Thr Ile Ala Ala Ser Ala Phe Arg Arg Leu Gly
 165 170 175
 Asp Pro Gly Leu Cys Gly Leu Val Val Ala Leu Ala Glu Ile Phe
 180 185 190
 Phe Arg Asp Gly Lys Ser Phe
 195

<210> 3759

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3759

ngtcgaatat ccatgcagac tagatacgtt cttaagaaac agcaataaag ctctctatgg
 60
 tctcatccag aagtgtaaaa acagatatag tgccttcaac taccgggcaa caggagaaga
 120
 agagcaaagg caggcggacg agctcctgga aaaaattgag agcatggtgc atcagaatgg
 180
 gaacaagcat tgtgttttca gagaaaaaga aaccctgaac attgtccttg tggggagaag
 240
 cgggactggg aagagtgcga ccgggaactc tatcctgggg agcctcgtct tcacctctcg
 300
 gtcctggggc cagccagtca ccaagaccag ccagagtggc aggaggacat gggacggaca
 360
 ggaggtggtg gttgtggaca ccttccttc aaccagatgc tggatgtcaa aggaccatc
 420
 ccggttaaaa gaggaggtca agcgtgttt gtcctgctgt gaaaaagggg acacatTTTT
 480
 gtccgtggtg tccagctggg acgattcact gaagaggaca aaacagctgt ggcgaaactg
 540

gaggccatct ttggagcaga ctttacgaaa tacgcgatta tgetgttcac ccggaaggaa
 600
 gacctagggg cggggaattt ggaagacttc atgaagaact cagataacaa agcccttcgg
 660
 cgcattttta aaaagtgggg ggggcgagtt tgtgctttta acaacaaaga aacaggccag
 720
 gcccaggaaa cccagggtgaa agctctttta acaaaggtea atgatctgag aaaagaaagt
 780
 ggggtgggtccg ggtatcccca tacacaggag aacgtcagcc cttcacgcgt
 830

<210> 3760
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 3760
 Glu His Gly Ala Ser Glu Trp Glu Gln Ala Leu Cys Phe Gln Arg Lys
 1 5 10 15
 Arg Asn Pro Glu His Cys Pro Cys Gly Glu Lys Arg Asp Trp Glu Glu
 20 25 30
 Cys Asp Arg Glu Leu Tyr Pro Gly Glu Pro Arg Leu His Leu Ser Ala
 35 40 45
 Pro Gly Pro Ala Ser His Gln Asp Gln Pro Glu Trp Gln Glu Asp Met
 50 55 60
 Gly Arg Thr Gly Gly Gly Cys Gly His Pro Ser Phe Asn Gln Met
 65 70 75 80
 Leu Asp Val Lys Gly Pro Ile Pro Val Lys Arg Gly Gly Gln Ala Leu
 85 90 95
 Phe Val Leu Leu
 100

<210> 3761
 <211> 458
 <212> DNA
 <213> Homo sapiens

<400> 3761
 acgcgtgcag gtggcaccca gcgccctcag gtgcgtaccc cgcccccgcc gccgacgccg
 60
 ccgacgccgc cattaagggc gggttgcctt tcggaacgtc ctcctcctga gggcctgggg
 120
 aagggaggcc gcccgggcgc agcgggaggt ggcccccg gacaccccg cgcctcgagg
 180
 cgaggcacc cgaaccccg atccctgctg gcaggaccag aggtgtgagg gtgggggcgg
 240
 ggaagccttg ccgcgggggc aatggtcgta cgcacggagc gcacatccct ctccttctg
 300
 attggccgag cgggggtgtg cgtgatgcca cgctccgcc gtcgtacgtg gggcgctcgc
 360
 gctgcgtgca gacgcgcttg attggtaga taagggggcg ggggccccg ctgttaccag
 420
 gcaactgcgc cccggatccg cccctgacg tcacgcgt
 458

<210> 3762
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 3762
 Thr Arg Ala Gly Gly Thr Gln Arg Pro Gln Val Arg Thr Pro Pro Pro
 1 5 10 15
 Pro Pro Thr Pro Pro Thr Pro Pro Leu Arg Ala Gly Cys Leu Ser Glu
 20 25 30
 Arg Pro Pro Pro Glu Gly Leu Gly Lys Gly Gly Arg Pro Ala Ala Ala
 35 40 45
 Gly Gly Gly Pro Pro Gly His Pro Gly Ala Pro Arg Arg Gly Thr Pro
 50 55 60
 Glu Pro Arg Ser Leu Leu Ala Gly Pro Glu Val
 65 70 75

<210> 3763
 <211> 1340
 <212> DNA
 <213> Homo sapiens

<400> 3763
 nnggcgtccg ctccctccccc tcgcggtcgg tagagctggc tgcgccgagc cccctgcacg
 60
 ctgcacatgg ggcgctgac ggaagcggcg gcagcgggca gcggctctcg ggctgcaggc
 120
 tgggcagggt cccctcccac gctcctgcgg ctgtctccca cgteccccag gtgcgcgggc
 180
 accatggcgt ccagcgacga ggacggcacc aacggcggcg cctcggaggc cggcgaggac
 240
 cgggaggctc ccggcaagcg gaggcgcctg gggttcttgg ccaccgcctg gctcaccttc
 300
 tacgacatcg ccatgaccgc ggggtggttg gttctagcta ttgccatggt acgtttttat
 360
 atggaaaagg gaacacacag agggttatat aaaagtattc agaagacact taaatttttc
 420
 cagacatttg ccttgcttga gatagttcac tgtttaattg gaattgtacc tacttctgtg
 480
 attgtgactg gggccaagt gagctcaaga atctttatgg tgtggctcat tactcacagt
 540
 ataaaaccaa tccagaatga agagagtgtg gtgctttttc tggtcgcgtg gactgtgaca
 600
 gagatcactc gctattcctt ctacacattc agccttcttg accacttgcc atacttcatt
 660
 aaatgggcca gatataattt ttttatcatt ttatatcctg ttggagtgc tggggaactt
 720
 cttacaatat acgtgcctt gccgtatgtg aagaaaacag gaatgttttc aataagactt
 780
 cctaacaat acaatgtctc ttttgactac tattattttc ttcttataac catggcatca
 840
 tatatacctt tgtttccaca actctatttt catatgttac gtcaaagaag aaagggtgctt
 900

catggagagg tgattgtaga aaaggatgat taaatgatct ctgcaaacaa ggtgcttttt
 960
 ccagaataac caagattacc tgagtccaag ttttaataac aagaataaac aactttgtga
 1020
 aatatcatgg attgtatggt ttcttaaaat ataacttgag acacgtggta tttgccagta
 1080
 tttgtgttcc tcttgtgccca gatctatttt ttacaagaac tgtgcccaata tcagtaactt
 1140
 ttgggtaggt attgattatt aggaaaataa ttaggtgtat tatctggggg aaaaaaaaaa
 1200
 ttttgctaag ttttttttga aacatgctca aagcttttta aatcaatatt tagaaattg
 1260
 tttaatgatt tactattata cctgctagtg atatttatgt gatatttaca aatgaaaatt
 1320
 aatgcaaaaat ttttaacaaa
 1340

<210> 3764

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3764

Met	Gly	Arg	Leu	Thr	Glu	Ala	Ala	Ala	Ala	Gly	Ser	Gly	Ser	Arg	Ala
1				5					10					15	
Ala	Gly	Trp	Ala	Gly	Ser	Pro	Pro	Thr	Leu	Leu	Pro	Leu	Ser	Pro	Thr
			20					25					30		
Ser	Pro	Arg	Cys	Ala	Ala	Thr	Met	Ala	Ser	Ser	Asp	Glu	Asp	Gly	Thr
		35					40					45			
Asn	Gly	Gly	Ala	Ser	Glu	Ala	Gly	Glu	Asp	Arg	Glu	Ala	Pro	Gly	Lys
	50				55					60					
Arg	Arg	Arg	Leu	Gly	Phe	Leu	Ala	Thr	Ala	Trp	Leu	Thr	Phe	Tyr	Asp
65					70					75				80	
Ile	Ala	Met	Thr	Ala	Gly	Trp	Leu	Val	Leu	Ala	Ile	Ala	Met	Val	Arg
			85					90						95	
Phe	Tyr	Met	Glu	Lys	Gly	Thr	His	Arg	Gly	Leu	Tyr	Lys	Ser	Ile	Gln
		100						105					110		
Lys	Thr	Leu	Lys	Phe	Phe	Gln	Thr	Phe	Ala	Leu	Leu	Glu	Ile	Val	His
		115					120					125			
Cys	Leu	Ile	Gly	Ile	Val	Pro	Thr	Ser	Val	Ile	Val	Thr	Gly	Val	Gln
	130					135						140			
Val	Ser	Ser	Arg	Ile	Phe	Met	Val	Trp	Leu	Ile	Thr	His	Ser	Ile	Lys
145				150						155				160	
Pro	Ile	Gln	Asn	Glu	Glu	Ser	Val	Val	Leu	Phe	Leu	Val	Ala	Trp	Thr
			165						170					175	
Val	Thr	Glu	Ile	Thr	Arg	Tyr	Ser	Phe	Tyr	Thr	Phe	Ser	Leu	Leu	Asp
		180						185					190		
His	Leu	Pro	Tyr	Phe	Ile	Lys	Trp	Ala	Arg	Tyr	Asn	Phe	Phe	Ile	Ile
		195					200					205			
Leu	Tyr	Pro	Val	Gly	Val	Ala	Gly	Glu	Leu	Leu	Thr	Ile	Tyr	Ala	Ala
	210					215					220				
Leu	Pro	Tyr	Val	Lys	Lys	Thr	Gly	Met	Phe	Ser	Ile	Arg	Leu	Pro	Asn
225					230					235				240	
Lys	Tyr	Asn	Val	Ser	Phe	Asp	Tyr	Tyr	Tyr	Phe	Leu	Leu	Ile	Thr	Met

				245					250					255		
Ala	Ser	Tyr	Ile	Pro	Leu	Phe	Pro	Gln	Leu	Tyr	Phe	His	Met	Leu	Arg	
			260					265					270			
Gln	Arg	Arg	Lys	Val	Leu	His	Gly	Glu	Val	Ile	Val	Glu	Lys	Asp	Asp	
			275				280					285				

```
<210> 3765
<211> 2764
<212> DNA
<213> Homo sapiens
```

```

<400> 3765
ngagtggctg ttgagcggcg ccgcgggaggt tccgcagggt tccctgttc gcagcggagc
60
cggaggccag ctgaaccgcg ccgtgggagtc ccgcatagga ggaggagggg acccatagga
120
cgcgtaaca tggacctgga aaacaaagtg aagaagatgg gcttaggtca cgagcaagga
180
tttgagccc cttgtttaaa atgcaaaaga aaatgtgaag gattcgaact gcacttctgg
240
agaaaaatat gtcgtaactg caagtgtggc caagaagagc atgatgtcct cttgagcaat
300
gaagaggatc gaaaagtggg aaaacttttt gaagacacca agtataccac tctgattgca
360
aaactaaagt cagatggaat tcccatgtat aaacgcaatg ttatgatatt gacgaatcca
420
gttgctgcca agaagaatgt ctccatcaat acagttacct atgagtgggc tcctcctgtc
480
cagaatcaag cattggccag gcagtacatg cagatgctac ccaaggaaaa gcagccagta
540
gcaggctcag aggggggcaca gtaccggaag aagcagctgg caaagcagct ccctgcacat
600
gaccaggacc cttcaaagtg ccatgagttg tctccagag aggtgaagga gatggagcag
660
tttgtgaaga aatataagag cgaagctctg ggagtaggag atgtcaaact tcctgtgag
720
atggatgccc aaggcccca acaaatgaac attcctggag gggatagaag caccacagca
780
gcagtggggg ccatggagga caaatctgct gaggacaaaa gaactcaata ttctgctat
840
tgctgcaaac tgagtatgaa agaaggtgac ccagccatct atgccgaaag ggctggctat
900
gataaactgt ggcaccagc ttgttttgc tgcagacct gccatgaact cctggtgac
960
atgatttatt tttggaagaa tgagaagcta tactgtggca gacattactg tgacagcgag
1020
aaaccccgat gtgctggctg tgacgagctg atattcagca atgagtatac ccaggcagaa
1080
aaccagaatt ggcacctgaa acacttctgc tgctttgact gtgatagcat tctagctggg
1140
gagatatacg tgatggtaaa tgacaagccc gtgtgcaagc cctgctatgt gaagaatcac
1200
gctgtggtgt gtcaaggatg ccacaatgcc atcgaccag aagtgcagcg ggtgacctat
1260

```

aacaatttca gctggcatgc atccacagag tgctttctgt gctcttgctg cagcaaatgc
1320
ctcattgggc agaagttcat gccagtagaa gggatgggtt tctgttcagt ggaatgtaag
1380
aagaggatgt cttaggagga gggcacccag aagtatcgag ccatagctat ccaaagtggt
1440
ctgcatttct actgtaaaat gcaatttgaa aaaaataaaa cgcaaaaaaa gaaactgtaa
1500
aggaaaccaa gagattttgt ttaatttttt tggccatttt ttcttcatca attttttttc
1560
ggctctcaact ttaaaacttg gtttaagcat ttgatttgta aaacagtaaa taattgtatc
1620
tttccatagc ttttcaaatg tgaaatcatt tttggaagct tggatctcat taaacttcat
1680
gtctctattc catttggtgcc acacacttaa aagttagtgt actgaatgga aagatgagca
1740
ttcctagttc tacacttctt tttccccct catgtgtaaa atgaaaagaa aactaaattt
1800
gccctaatac caaggcgcta cgtttattgc ctctcttat tcaactgacct ttgtaatgat
1860
acacagtga ttttttttga caaagagaaa tgcagtgtag tatgcagagc tgctgtttta
1920
atgccctatg catttactct ttcctgattt aggcagaggt ggcattttct ttattgcatt
1980
tctctatttt ttaaatgtac cctaccttca gtattctctt tgtaagtgg tgacttgcat
2040
ctgtggcctt gaatatttta ttatcacatg tggcataaca gtatccacac tttttagttc
2100
tttatttttt tttttttatt ttgagcaatt ctctgcttc agcctcccaa atagctggga
2160
ttacaggtgc atgccaccac acccagctaa tttttgtatt tttagtagag acaggttttc
2220
accatgttag ccaggctggg ctcaaactcc tgacctcaga tgatccgctt gccttgacct
2280
cccaaagtgc tgggattaca ggtgtgggag ccaccatgcc tgacctcacac actttttact
2340
tgtatagatg atttttggct tggacataaa agccaagcca cccatttgc tttaatccaa
2400
agaacatgta tagtttttgt acccagagac tatgatttat attgattgca cttgcctgcc
2460
atgattttaga taagattttt tttgcatggg ttttattctt tctaatgga tctgtttta
2520
taatacttcc aagcctgtcc atggatatat caaatgtctt cacttgata ttttcatggc
2580
taggtatttc taatgtttat tcttccctgt gtacttctac acatagctat gcactatgaa
2640
aattaaatgg aatgaatgat atgtatatta ctcatccat ttaattttca tagtgcatag
2700
ctatgaaaat taaatggaat gaatgatatg tatattactc aaaataaagt ttctttcact
2760
ttaa
2764

<210> 3766

<211> 464

<212> PRT

<213> Homo sapiens

<400> 3766

Xaa Val Ala Val Glu Arg Arg Arg Gly Ser Ser Ala Gly Phe Pro Cys
 1 5 10 15
 Ser Gln Arg Ser Arg Arg Pro Ala Glu Pro Gly Arg Gly Ile Pro Asp
 20 25 30
 Arg Arg Arg Arg Gly Pro Ile Gly Arg Val Asn Met Asp Leu Glu Asn
 35 40 45
 Lys Val Lys Lys Met Gly Leu Gly His Glu Gln Gly Phe Gly Ala Pro
 50 55 60
 Cys Leu Lys Cys Lys Glu Lys Cys Glu Gly Phe Glu Leu His Phe Trp
 65 70 75 80
 Arg Lys Ile Cys Arg Asn Cys Lys Cys Gly Gln Glu Glu His Asp Val
 85 90 95
 Leu Leu Ser Asn Glu Glu Asp Arg Lys Val Gly Lys Leu Phe Glu Asp
 100 105 110
 Thr Lys Tyr Thr Thr Leu Ile Ala Lys Leu Lys Ser Asp Gly Ile Pro
 115 120 125
 Met Tyr Lys Arg Asn Val Met Ile Leu Thr Asn Pro Val Ala Ala Lys
 130 135 140
 Lys Asn Val Ser Ile Asn Thr Val Thr Tyr Glu Trp Ala Pro Pro Val
 145 150 155 160
 Gln Asn Gln Ala Leu Ala Arg Gln Tyr Met Gln Met Leu Pro Lys Glu
 165 170 175
 Lys Gln Pro Val Ala Gly Ser Glu Gly Ala Gln Tyr Arg Lys Lys Gln
 180 185 190
 Leu Ala Lys Gln Leu Pro Ala His Asp Gln Asp Pro Ser Lys Cys His
 195 200 205
 Glu Leu Ser Pro Arg Glu Val Lys Glu Met Glu Gln Phe Val Lys Lys
 210 215 220
 Tyr Lys Ser Glu Ala Leu Gly Val Gly Asp Val Lys Leu Pro Cys Glu
 225 230 235 240
 Met Asp Ala Gln Gly Pro Lys Gln Met Asn Ile Pro Gly Gly Asp Arg
 245 250 255
 Ser Thr Pro Ala Ala Val Gly Ala Met Glu Asp Lys Ser Ala Glu His
 260 265 270
 Lys Arg Thr Gln Tyr Ser Cys Tyr Cys Cys Lys Leu Ser Met Lys Glu
 275 280 285
 Gly Asp Pro Ala Ile Tyr Ala Glu Arg Ala Gly Tyr Asp Lys Leu Trp
 290 295 300
 His Pro Ala Cys Phe Val Cys Ser Thr Cys His Glu Leu Leu Val Asp
 305 310 315 320
 Met Ile Tyr Phe Trp Lys Asn Glu Lys Leu Tyr Cys Gly Arg His Tyr
 325 330 335
 Cys Asp Ser Glu Lys Pro Arg Cys Ala Gly Cys Asp Glu Leu Ile Phe
 340 345 350
 Ser Asn Glu Tyr Thr Gln Ala Glu Asn Gln Asn Trp His Leu Lys His
 355 360 365
 Phe Cys Cys Phe Asp Cys Asp Ser Ile Leu Ala Gly Glu Ile Tyr Val
 370 375 380
 Met Val Asn Asp Lys Pro Val Cys Lys Pro Cys Tyr Val Lys Asn His

385		390		395		400									
Ala	Val	Val	Cys	Gln	Gly	Cys	His	Asn	Ala	Ile	Asp	Pro	Glu	Val	Gln
			405						410					415	
Arg	Val	Thr	Tyr	Asn	Asn	Phe	Ser	Trp	His	Ala	Ser	Thr	Glu	Cys	Phe
			420					425					430		
Leu	Cys	Ser	Cys	Cys	Ser	Lys	Cys	Leu	Ile	Gly	Gln	Lys	Phe	Met	Pro
			435				440					445			
Val	Glu	Gly	Met	Val	Phe	Cys	Ser	Val	Glu	Cys	Lys	Lys	Arg	Met	Ser
			450				455					460			

<210> 3767

<211> 2439

<212> DNA

<213> Homo sapiens

<400> 3767

```

ntttttttta tagtttaatg tattttaata gcaagtgata taccacgagg agcaaatggc
60
acatgggaccc tccgtccttg ggggtggacag aaccaactgc tcctgtcact gtttctacc
120
gggcccagac acgccccaga gccccgcaca ggccagttgc tactgccagt cgtgaggcga
180
acccacctgc tgacccaaag ccatgccggt tccaccatga gactgagtgt gggcacttgt
240
gagcgtgctt ctggggcgca caggcgctct gacgggccga agtgagaatt ccagtgcctc
300
agtatagtat atacaatata attaggagag aaagaagcag gatatgaaaa catacttttt
360
gttattggca tgaaaggcca tggctcctgt catgtcccca gactgtgata agccagggtta
420
aactccagca cctgaaagggt gttctcacct gcagtgaatc tgtcgtgtgg ctggtgagca
480
gcccgcctct gccgtagccc tggccgtggg ctgtgaggag acgtccgcac aggtccactg
540
ctgccctcca gtttctgcag ctgattagct gtttcaatcc aacaaaagat tgttccactg
600
agtcggcatt taggacttgt ctctttgctg cagctttttc acccagaaag cgaagcatca
660
agtctttaac tgcctctccc tggatgttgt cgaacctgag gcccggcag gtgaggttct
720
ccttgctcac gaacacggcg ccgcgctgct ggggtggccac ggcccgcagg gcccagga
780
gctgcgcccc cggcgctgcc agagcctttc gcgcacatcc aggcagtgtt tgcaggaggt
840
gacgacccct ttgccaccgc cctgagcatg ggcgagatgg accggaggaa cgacgcctgg
900
cttcccggcg aggcctacgc tggagtcctg cgggcccgtg ccaccagca gcgcggcgcc
960
gtgttcgtgg acaaggagaa cctcaccatg ccgggcctca ggttcgacaa catccaggga
1020
gatgcagtta aagacttgat gcttcgcttt ctgggtgaaa aagctgcagc aaagagacaa
1080
gtcctaaatg ccgactcagt ggaacaatct tttgttggat tgaaacagct aatcagctgc
1140

```

agaaactgga gggcagcagt ggacctgtgc ggacgtctcc tcacagccca cggccagggc
 1200
 tacggcaaga ggggctgct caccagccac acgacagatt cactgcagct ctggtttgtc
 1260
 aggctggcac tactagtga gttgggcctt ttccagaatg ctgagatgga atttgaaccc
 1320
 ttcggaaatc ttgatcagcc agatctttat tacgagtact acccgacgt gtaccctggg
 1380
 cgcaggggct ccatggctcc cttctcgatg cgcattctgc acgcggagct tcagcagtac
 1440
 ctggggaacc cacaggagtc gctggataga ctgcacaagg tgaagactgt ctgcagcaag
 1500
 atcctggcca atttgagca aggcttagca gaagacggcg gcatgagcag cgtgactcag
 1560
 gagggcagac aagcctctat cggctgtgg aggtcacgtc tgggccgggt gatgtactcc
 1620
 atggcaaaact gtctgtcct gatgaaggat tatgtgctgg cgtggaggc gtatcattcg
 1680
 gttatcaagt attaccaga gcaagagccc cagctgctca gggcatcgg ccggatttcc
 1740
 ctccagattg gagacataaa aacagctgaa aagtatttcc aagacgttga gaaagtaaca
 1800
 cagaaattag atggactaca gggtaaaatc atggttttga tgaacagcgc gttccttcac
 1860
 ctccggcaga ataactttgc agaagccac aggttcttca cagagatctt aaggatggat
 1920
 ccaagaaacg cagtggccaa caacaacgt gccgtgtgtc tgctctacct gggcaagctc
 1980
 aaggactccc tgccgcagct ggaggccatg gtccagcagg accccaggca ctacctgcac
 2040
 gagagcgtgc tcttcaacct gaccaccatg tacgagctgg agtcctcacg gagcatgcag
 2100
 aagaaacagg ccctgctgga ggctgtcgcc ggcaaggagg gggacagctt caacacacag
 2160
 tgcctcaagc tggcctagct gcctccaaca cactacgtca gaaggaccg ggtctttgaa
 2220
 actgtgtctt gaagctaattg tattaatgtg acatggagga actcaataaa actccttttc
 2280
 tctttanttt tctaaagttt gactatgtg tgtcttattt tacatttctg tagatttatt
 2340
 gtgtttttta ttcaactcagc ttcaatctgt atgtttatgt ctttcaccaa attggaaagt
 2400
 ttttcacttt gattatttga ttttatattg ctttgatca
 2439

<210> 3768

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3768

Met Leu Arg Phe Leu Gly Glu Lys Ala Ala Ala Lys Arg Gln Val Leu

1

5

10

15

Asn Ala Asp Ser Val Glu Gln Ser Phe Val Gly Leu Lys Gln Leu Ile

```

                20                25                30
Ser Cys Arg Asn Trp Arg Ala Ala Val Asp Leu Cys Gly Arg Leu Leu
                35                40                45
Thr Ala His Gly Gln Gly Tyr Gly Lys Ser Gly Leu Leu Thr Ser His
                50                55                60
Thr Thr Asp Ser Leu Gln Leu Trp Phe Val Arg Leu Ala Leu Leu Val
        65                70                75                80
Lys Leu Gly Leu Phe Gln Asn Ala Glu Met Glu Phe Glu Pro Phe Gly
                85                90                95
Asn Leu Asp Gln Pro Asp Leu Tyr Tyr Glu Tyr Tyr Pro His Val Tyr
                100                105                110
Pro Gly Arg Arg Gly Ser Met Val Pro Phe Ser Met Arg Ile Leu His
                115                120                125
Ala Glu Leu Gln Gln Tyr Leu Gly Asn Pro Gln Glu Ser Leu Asp Arg
        130                135                140
Leu His Lys Val Lys Thr Val Cys Ser Lys Ile Leu Ala Asn Leu Glu
        145                150                155                160
Gln Gly Leu Ala Glu Asp Gly Gly Met Ser Ser Val Thr Gln Glu Gly
                165                170                175
Arg Gln Ala Ser Ile Arg Leu Trp Arg Ser Arg Leu Gly Arg Val Met
                180                185                190
Tyr Ser Met Ala Asn Cys Leu Leu Leu Met Lys Asp Tyr Val Leu Ala
                195                200                205
Val Glu Ala Tyr His Ser Val Ile Lys Tyr Tyr Pro Glu Gln Glu Pro
        210                215                220
Gln Leu Leu Ser Gly Ile Gly Arg Ile Ser Leu Gln Ile Gly Asp Ile
        225                230                235                240
Lys Thr Ala Glu Lys Tyr Phe Gln Asp Val Glu Lys Val Thr Gln Lys
                245                250                255
Leu Asp Gly Leu Gln Gly Lys Ile Met Val Leu Met Asn Ser Ala Phe
                260                265                270
Leu His Leu Gly Gln Asn Asn Phe Ala Glu Ala His Arg Phe Phe Thr
                275                280                285
Glu Ile Leu Arg Met Asp Pro Arg Asn Ala Val Ala Asn Asn Asn Ala
        290                295                300
Ala Val Cys Leu Leu Tyr Leu Gly Lys Leu Lys Asp Ser Leu Arg Gln
        305                310                315                320
Leu Glu Ala Met Val Gln Gln Asp Pro Arg His Tyr Leu His Glu Ser
                325                330                335
Val Leu Phe Asn Leu Thr Thr Met Tyr Glu Leu Glu Ser Ser Arg Ser
                340                345                350
Met Gln Lys Lys Gln Ala Leu Leu Glu Ala Val Ala Gly Lys Glu Gly
                355                360                365
Asp Ser Phe Asn Thr Gln Cys Leu Lys Leu Ala
        370                375

```

<210> 3769

<211> 1931

<212> DNA

<213> Homo sapiens

<400> 3769

nacgcgtgta cgctcatggag gatatcacat tcaacgtgaa ggttgcttca ggtgaatgca
60

atgaagacac tgaagtttac aacatcaccc tgtgtactgg ggatgaactc actctaattg
120
ggcaggcaga aatcctttat gcaaagacat tcaaggaaaa gtcacgactc aacacaatct
180
tcaaaaagat tgggaagctc aattccatca gcaagctggg aaaaggcaaa atgccgtgcc
240
tcatttgtat gaatcacccg accaacgaaa gcattagcct tccattccag tgcaagggca
300
gatttagcac ccgaagtccc ctggaacttc agatgcaaga gggcgaacac accatccgca
360
acatttgtga gaaaaccagg ctctctgtga atgtgactgt gccaagccct ccaccgagaa
420
acccatacga cctccacttc atccgtgagg ggcaccgcta taagtttgtg agcatccaga
480
ccaagacggg ggtggtttgc tgtgtgtctgc ggaacaacaa gatcctcccc atgcactttc
540
ctttgcactt gactgtcccc aagttcagcc tcccagaacc cctgggtgaag ggagagagct
600
ggcccgaaac cctgggtccc tcccgggcta ggtatctgcc aagaacagtt cgacatcgat
660
gagtattcac gggtgtccg tgatgtgaaa accgactgga atgaagaatg caagagcccc
720
aagaagggtc ggtgctctgg ccacaaccac gtgcccatt cgctcagcta cgcccgcgat
780
gagctcacc agtccttcca ccgactctcg gtctgtgtgt atggcaacaa tctccatggc
840
aacagtgagg tgaaccttca tggttgcagg gacctggggg gagattgggc tccctttcct
900
catgacatcc tgccctatca ggactctgga gatagtggga gcgactacct tttcccagaa
960
gctagtgaag aatcagcagg catccccgga agtcagaac ttccctacga agagctgtgg
1020
ctggaggaag gcaagcccag ccatacgcct ctactcgtct ctctgagcga gaagaacaga
1080
tgtgatcagt ttagagggtc tgtccgatcc aaatgtgcga ctctctctct tcccatccct
1140
gggactctgg gagcagcagt gaagtcttca gatactgccc tacctccacc tccagtgcct
1200
cccaaactcg aagccgtcag agaagaatgc cggctcctga acgccccacc tgttcacccc
1260
cgaagcgcaa agcctttgtc caccagtccc tccatccctc ctgcacagt caagccagcg
1320
cggcaacaga ctctctctcc cagccccacc ttgtcctact attcttcagg gctacacaa
1380
atcgtcacta aaactgacac aaatccttct gaaagcactc ctgtttcctg ctatccatgt
1440
aaccgagtga aaactgattc tgtggacctg aaatccccgt ttggaagtcc ttctgctgaa
1500
gtgtgtcct ctctgctctc atggcctaac cattattcag gagcatcaga aagccagacc
1560
aggagtgact tctgtctgga tccaagcagg agttatagtt accctagaca aaagacgcca
1620
ggcacaccaa agagaaaactg ccagcacct tttgattttg atggctgtga gctcctggcc
1680

agccccacta gccagtcac tgcagaattc agtagcagcg tctctggttg tcccaagtca
 1740
 gccagctact ctctggagag cacagatgtg aaatctcttg cagctggtgt gacaaagcag
 1800
 agtacgtcat gccctgcctt accccccagg gctccaaaac tagtggaaga gaaggctgcc
 1860
 tccgaaacat ctcttttgcc tctgaaaatt gatggtgctg aggaagaccc caagtctggg
 1920
 tcaccagatc t
 1931

<210> 3770

<211> 447

<212> PRT

<213> Homo sapiens

<400> 3770

Arg	Glu	Arg	Ala	Gly	Pro	Lys	Pro	Trp	Ser	His	Pro	Gly	Leu	Gly	Ile
1				5				10					15		
Cys	Gln	Glu	Gln	Phe	Asp	Ile	Asp	Glu	Tyr	Ser	Arg	Ala	Val	Arg	Asp
		20					25						30		
Val	Lys	Thr	Asp	Trp	Asn	Glu	Glu	Cys	Lys	Ser	Pro	Lys	Lys	Gly	Arg
		35				40						45			
Cys	Ser	Gly	His	Asn	His	Val	Pro	Asn	Ser	Leu	Ser	Tyr	Ala	Arg	Asp
	50				55				60						
Glu	Leu	Thr	Gln	Ser	Phe	His	Arg	Leu	Ser	Val	Cys	Val	Tyr	Gly	Asn
65				70					75						80
Asn	Leu	His	Gly	Asn	Ser	Glu	Val	Asn	Leu	His	Gly	Cys	Arg	Asp	Leu
		85						90					95		
Gly	Gly	Asp	Trp	Ala	Pro	Phe	Pro	His	Asp	Ile	Leu	Pro	Tyr	Gln	Asp
		100					105						110		
Ser	Gly	Asp	Ser	Gly	Ser	Asp	Tyr	Leu	Phe	Pro	Glu	Ala	Ser	Glu	Glu
	115					120					125				
Ser	Ala	Gly	Ile	Pro	Gly	Lys	Ser	Glu	Leu	Pro	Tyr	Glu	Glu	Leu	Trp
	130					135					140				
Leu	Glu	Glu	Gly	Lys	Pro	Ser	His	Gln	Pro	Leu	Thr	Arg	Ser	Leu	Ser
145				150					155					160	
Glu	Lys	Asn	Arg	Cys	Asp	Gln	Phe	Arg	Gly	Ser	Val	Arg	Ser	Lys	Cys
		165						170					175		
Ala	Thr	Ser	Pro	Leu	Pro	Ile	Pro	Gly	Thr	Leu	Gly	Ala	Ala	Val	Lys
		180						185					190		
Ser	Ser	Asp	Thr	Ala	Leu	Pro	Pro	Pro	Pro	Val	Pro	Pro	Lys	Ser	Glu
	195					200						205			
Ala	Val	Arg	Glu	Glu	Cys	Arg	Leu	Leu	Asn	Ala	Pro	Pro	Val	Pro	Pro
	210					215					220				
Arg	Ser	Ala	Lys	Pro	Leu	Ser	Thr	Ser	Pro	Ser	Ile	Pro	Pro	Arg	Thr
225				230					235					240	
Val	Lys	Pro	Ala	Arg	Gln	Gln	Thr	Arg	Ser	Pro	Ser	Pro	Thr	Leu	Ser
		245						250					255		
Tyr	Tyr	Ser	Ser	Gly	Leu	His	Asn	Ile	Val	Thr	Lys	Thr	Asp	Thr	Asn
	260							265					270		
Pro	Ser	Glu	Ser	Thr	Pro	Val	Ser	Cys	Tyr	Pro	Cys	Asn	Arg	Val	Lys
	275						280					285			
Thr	Asp	Ser	Val	Asp	Leu	Lys	Ser	Pro	Phe	Gly	Ser	Pro	Ser	Ala	Glu

```

      290              295              300
Ala Val Ser Ser Arg Leu Ser Trp Pro Asn His Tyr Ser Gly Ala Ser
305              310              315              320
Glu Ser Gln Thr Arg Ser Asp Phe Leu Leu Asp Pro Ser Arg Ser Tyr
      325              330              335
Ser Tyr Pro Arg Gln Lys Thr Pro Gly Thr Pro Lys Arg Asn Cys Pro
      340              345              350
Ala Pro Phe Asp Phe Asp Gly Cys Glu Leu Leu Ala Ser Pro Thr Ser
      355              360              365
Pro Val Thr Ala Glu Phe Ser Ser Ser Val Ser Gly Cys Pro Lys Ser
      370              375              380
Ala Ser Tyr Ser Leu Glu Ser Thr Asp Val Lys Ser Leu Ala Ala Gly
385              390              395              400
Val Thr Lys Gln Ser Thr Ser Cys Pro Ala Leu Pro Pro Arg Ala Pro
      405              410              415
Lys Leu Val Glu Glu Lys Val Ala Ser Glu Thr Ser Pro Leu Pro Leu
      420              425              430
Lys Ile Asp Gly Ala Glu Glu Asp Pro Lys Ser Gly Ser Pro Asp
      435              440              445

```

<210> 3771

<211> 1514

<212> DNA

<213> Homo sapiens

<400> 3771

```

ttcactattc atgatagtga attcaaagaa tatactaccc gtacccaacg tccgcctca
60
ggttatattag gagtaaccaa cccttttttt gctaagacac tccagcactg gccacacatt
120
attcgaatag gagaccttaa acctacaagt gaaattccta agcagggttaa agtgaaaaaa
180
ctgaagaatc taaagactct ggattccaaa cctggagttt atacttcata taagccatat
240
ttaaatagag atgaagagat cataaaacaa ttacagaagg gtgtacaaca gaaacgtcct
300
tctgaggctc aaagtgttat tcttcgacgc tatttttttg aactgacaca aagtttcac
360
attccattag aaagatatgt ggcaagcttg atgcctttgc agaaaagtat tcccccatgg
420
aagagtccac ctcaattaag acagtttctt ccagaagaat ttatgaaaac acttgagaaa
480
acaggacctc agctaacctc tagaataaaa ggcgattgga ttggacttta ccggcatttc
540
ctaaagtctc caaattttga tggctggttt aagacccgga ggaaggaaat gacccaaaaa
600
ttggaggcac tccatctaga agctctttgt gaagaggact tacttctctg gatccagaaa
660
cacacagaag tagaaacagt agaccttgct ttgaagctga aaaataagct gttgcaggct
720
gatcgagagc acttacctgt gaaacctgac actatgaaa agttacggac acacatagat
780
gccattatct tagcattgcc agaggacttg caaggcatac tgctcaaaac gggcatgaca
840

```

tgatatttgc caagattttc cagccaaaaa ggattatgca tcatgaagca tactgacatt
 900
 tcaaccagac gcacaaagga gatctctcag tggcagcgga gtggaaaatt gccatgaatg
 960
 ctagttagcag ggtagaaaga ctgtattgta taaacagacc tttttagtgc attacttttt
 1020
 aaagtggata tctgtggtgg ttccacttta atactgaaac accgaaaggc atttctatat
 1080
 ttttaatcat gttctaaagt gctcttatga gagacttggt ggccatcagt attagtgatt
 1140
 tcatactgca gtgctggcat tgcagatatt tttttaaatt ggtgctgctt tgcccaatca
 1200
 tgttaaaact cagggggata taaaaataac attcacactg gctatcttct taagaacaga
 1260
 aagactgaac tgctctatgg ttagaaggaa ttgatgctta ttagtgctt tctgttgccc
 1320
 tacatgtttc acagttcagc tgctagtctt gaagcttttc cttagcttca ttatgatacg
 1380
 taattttata aggtattctg ttgagtgatc attgtttaaa aaaaaagttt cttgctaccc
 1440
 attgtgttta ttaatagaca tgatgggttt ttttcagttg tcatatagat tttcattatt
 1500
 ttcccttcac gcgt
 1514

<210> 3772

<211> 280

<212> PRT

<213> Homo sapiens

<400> 3772

Phe	Thr	Ile	His	Asp	Ser	Glu	Phe	Lys	Glu	Tyr	Thr	Thr	Arg	Thr	Gln
1				5					10					15	
Arg	Pro	Pro	Ser	Val	Ile	Leu	Gly	Val	Thr	Asn	Pro	Phe	Phe	Ala	Lys
			20					25					30		
Thr	Leu	Gln	His	Trp	Pro	His	Ile	Ile	Arg	Ile	Gly	Asp	Leu	Lys	Pro
		35					40					45			
Thr	Ser	Glu	Ile	Pro	Lys	Gln	Val	Lys	Val	Lys	Lys	Leu	Lys	Asn	Leu
	50					55					60				
Lys	Thr	Leu	Asp	Ser	Lys	Pro	Gly	Val	Tyr	Thr	Ser	Tyr	Lys	Pro	Tyr
65					70				75					80	
Leu	Asn	Arg	Asp	Glu	Ile	Ile	Lys	Gln	Leu	Gln	Lys	Gly	Val	Gln	
			85					90					95		
Gln	Lys	Arg	Pro	Ser	Glu	Ala	Gln	Ser	Val	Ile	Leu	Arg	Arg	Tyr	Phe
			100					105					110		
Leu	Glu	Leu	Thr	Gln	Ser	Phe	Ile	Ile	Pro	Leu	Glu	Arg	Tyr	Val	Ala
	115						120					125			
Ser	Leu	Met	Pro	Leu	Gln	Lys	Ser	Ile	Ser	Pro	Trp	Lys	Ser	Pro	Pro
	130					135					140				
Gln	Leu	Arg	Gln	Phe	Leu	Pro	Glu	Glu	Phe	Met	Lys	Thr	Leu	Glu	Lys
145					150					155				160	
Thr	Gly	Pro	Gln	Leu	Thr	Ser	Arg	Ile	Lys	Gly	Asp	Trp	Ile	Gly	Leu
			165						170					175	
Tyr	Arg	His	Phe	Leu	Lys	Ser	Pro	Asn	Phe	Asp	Gly	Trp	Phe	Lys	Thr

	180		185		190										
Arg	Arg	Lys	Glu	Met	Thr	Gln	Lys	Leu	Glu	Ala	Leu	His	Leu	Glu	Ala
	195						200					205			
Leu	Cys	Glu	Glu	Asp	Leu	Leu	Leu	Trp	Ile	Gln	Lys	His	Thr	Glu	Val
	210					215					220				
Glu	Thr	Val	Asp	Leu	Val	Leu	Lys	Leu	Lys	Asn	Lys	Leu	Leu	Gln	Ala
225					230					235				240	
Asp	Arg	Glu	His	Leu	Pro	Val	Lys	Pro	Asp	Thr	Met	Glu	Lys	Leu	Arg
			245						250					255	
Thr	His	Ile	Asp	Ala	Ile	Ile	Leu	Ala	Leu	Pro	Glu	Asp	Leu	Gln	Gly
		260					265						270		
Ile	Leu	Leu	Lys	Thr	Gly	Met	Thr								
	275						280								

<210> 3773

<211> 2664

<212> DNA

<213> Homo sapiens

<400> 3773

```

gcgcccgcca ggcggttcagg gaagcgcggc cagcctggg ccggccacca tttcccgggc
60
gccgcggcgg cgcgactcgc gggcagcggc ccctcagtgc gccagccgg gccccgaac
120
gccgggagca tgagcgcggg ctccggagcg gggcgggcgg caacccccgg gggtttgccc
180
gcgcctctgc cctcgaaggt ggagctgcgg ctccagctgcc ggcacctgct ggaccgcgac
240
ccgctcacca agtccgaccc cagcgtggcg ttgctgcagc aggcgcaggg ccagtgggtg
300
caggtgggca gaaccgaggt ggtccggagc agcctgcac ccgtgttctc caaggtcttc
360
acggtggact actacttcga ggaggtgcag aggctgcgct ttgaggtgta cgacacgcat
420
gggcccagcg gcttcagctg tcaggaggac gatttctctg ggggcatgga gtgcaccctg
480
gggcagccag cccaaaagtg gcttctgcaa gtcgtgatga gagtgtctgt tgatgtgctg
540
ggccctgctg gacactgcgc taagcacttc ctgtgctgca cggaatcctc acaccttgcc
600
aggacgggtc cttctttttt attgaggtat gatgacctct gcctcccctg ggcgactgct
660
ggcgccgtga ggtggtggac gtgcaggggt ggccacacgc agggatggca gattgtggcc
720
cagaagaagg tgaccgccc gctgctgctc aagtttgga ggaacgctgg caagtccacc
780
atcacggtga tcgccgagga catctcgggg aacaacggct acgtggagct ctccttcggg
840
gccaggaagc tggacgacaa ggacctcttc agcaagtccg accccttctt ggagctctac
900
agggtcaacg acgaccaggg cttgcagctg gtgtacagga cggaggtggg gaagaacaac
960
ctgaacccca gctgggagcc gttcaaagtc tctctgagtt ccctatgcag ctgtgatgtt
1020

```

caccgacctc taaagtccct ggtctgggat tacgactcca gtgggaagca tgacttcac
1080
ggcgagttca ccagcacttt ccaggagatg caggaaggga cggcaaacc tgggcaggag
1140
atgcagtggg actgtatcaa cccaagtat cgggacaaga agaagaatta taagaactca
1200
ggagtggtag tgctggctga cctcaagttc cacagggtgt actccttcct ggactatata
1260
atgggtggct gccagatcag cttcaccgtg gccattgact tcaccgcctc caatggggac
1320
ccgaggagca gccagtcctt gcactacatc agtccccgac agcccaacca ctacctgcag
1380
gccctgcgtg cagtgggagg catctgccag gactatgaca gtgataagag gttcccagct
1440
tttggctttg gggctcgat ccccccaac ttcgaggtgt cccatgactt tgctatcaat
1500
ttcaacctg aggacgatga gtgtgaaggc atccaggcg tggtggaggc ctaccagaac
1560
tgctgacca ggtccagct ctacggcccc accaacgtgg cgcctcatcat ctccaagggtg
1620
gctgaaccag ccagcgaga gcagagcacc ggccaagcca cgaagtattc agtactgctg
1680
gtgctcactg acggtgtggt gagtgatatg gcagagaccc gaacagccat tgtgcgagcc
1740
tccgcctgc ccatgtcaat catcatcgtg ggtgtgggca acgctgactt ctctgacatg
1800
aggctactgg acggagatga tggctccctg cgttgccac ggggtgagcc cgcgctccgg
1860
gacatcgtac agttcgtgcc ctccgggag ctcaagaacg catccctgc ggcgctggcc
1920
aagtgcgtgc tggccgaggt cccgaagcag gtggtggagt actacagcca cagaggcctg
1980
cccccgagaa gcctgggtgt ccctgccgga gaggccagcc caggctgcac accgtgaaga
2040
tgtggagggc gtagggtggg ggcagtgagg aatgggtccg tacagcctct gtctgcaaca
2100
tgcttgggtt ccttaagct ccctccgacc tcccagaagc ctccagtccc caccaggccc
2160
cactcccagt cctcctggga tectgctggc ttgggcccgg ctctggggcc cccaaggccg
2220
aagggtgaca aaatacaggc ccccatgcct ggccctgcct gagccagggtg ggtggaggga
2280
gggagatcat gagggacttg gaggagctg ggagttcatc cacgggagac cctgccccga
2340
tgagaagggg cagggactgg gggctctgct ttgcgtctaa cctttgtggg ggaggggcag
2400
caaggcagtc cccccagcc cgagaaagcc tgggggaccc agacacctgt cccacagtc
2460
aaagcctggg gaccagaca tcctgtcccc acagtcagcc tcctgtccct gctgggtccc
2520
ccacaccac ctacctgtg ctttttgccg tcgggcctct gcacctgggt coatggggtc
2580
tgcggggtct gcgggtctg cctggcctgt gggttctgcc ggtggggctt caggagtaat
2640

aaagtgtcac cctatccttg taaa
2664

<210> 3774

<211> 678

<212> PRT

<213> Homo sapiens

<400> 3774

Ala	Pro	Gly	Arg	Arg	Ser	Gly	Lys	Arg	Gly	His	Ala	Trp	Ala	Gly	His
1				5					10					15	
His	Phe	Pro	Gly	Ala	Ala	Ala	Ala	Arg	Leu	Ala	Gly	Ser	Gly	Pro	Ser
		20						25					30		
Val	Arg	Pro	Ala	Gly	Pro	Pro	Asn	Ala	Gly	Ser	Met	Ser	Ala	Gly	Ser
		35					40					45			
Glu	Arg	Gly	Ala	Ala	Ala	Thr	Pro	Gly	Gly	Leu	Pro	Ala	Pro	Cys	Ala
	50					55					60				
Ser	Lys	Val	Glu	Leu	Arg	Leu	Ser	Cys	Arg	His	Leu	Leu	Asp	Arg	Asp
65					70				75					80	
Pro	Leu	Thr	Lys	Ser	Asp	Pro	Ser	Val	Ala	Leu	Leu	Gln	Gln	Ala	Gln
			85						90					95	
Gly	Gln	Trp	Val	Gln	Val	Gly	Arg	Thr	Glu	Val	Val	Arg	Ser	Ser	Leu
		100						105					110		
His	Pro	Val	Phe	Ser	Lys	Val	Phe	Thr	Val	Asp	Tyr	Tyr	Phe	Glu	Glu
		115					120					125			
Val	Gln	Arg	Leu	Arg	Phe	Glu	Val	Tyr	Asp	Thr	His	Gly	Pro	Ser	Gly
	130					135					140				
Phe	Ser	Cys	Gln	Glu	Asp	Asp	Phe	Leu	Gly	Gly	Met	Glu	Cys	Thr	Leu
145					150				155					160	
Gly	Gln	Pro	Ala	Gln	Lys	Trp	Leu	Leu	Gln	Val	Val	Met	Arg	Val	Ser
			165						170					175	
Val	Asp	Val	Leu	Gly	Pro	Ala	Gly	His	Cys	Ala	Lys	His	Phe	Leu	Cys
		180						185					190		
Cys	Thr	Glu	Ser	Ser	His	Leu	Ala	Arg	Thr	Gly	Pro	Ser	Phe	Leu	Leu
		195					200					205			
Arg	Tyr	Asp	Asp	Leu	Cys	Leu	Pro	Trp	Ala	Thr	Ala	Gly	Ala	Val	Arg
	210					215						220			
Trp	Trp	Thr	Cys	Arg	Gly	Gly	His	Thr	Gln	Gly	Trp	Gln	Ile	Val	Ala
225					230					235				240	
Gln	Lys	Lys	Val	Thr	Arg	Pro	Leu	Leu	Leu	Lys	Phe	Gly	Arg	Asn	Ala
			245						250					255	
Gly	Lys	Ser	Thr	Ile	Thr	Val	Ile	Ala	Glu	Asp	Ile	Ser	Gly	Asn	Asn
		260						265				270			
Gly	Tyr	Val	Glu	Leu	Ser	Phe	Arg	Ala	Arg	Lys	Leu	Asp	Asp	Lys	Asp
		275					280					285			
Leu	Phe	Ser	Lys	Ser	Asp	Pro	Phe	Leu	Glu	Leu	Tyr	Arg	Val	Asn	Asp
	290					295					300				
Asp	Gln	Gly	Leu	Gln	Leu	Val	Tyr	Arg	Thr	Glu	Val	Val	Lys	Asn	Asn
305					310					315				320	
Leu	Asn	Pro	Ser	Trp	Glu	Pro	Phe	Lys	Val	Ser	Leu	Ser	Ser	Leu	Cys
			325						330					335	
Ser	Cys	Asp	Val	His	Arg	Pro	Leu	Lys	Phe	Leu	Val	Trp	Asp	Tyr	Asp
		340						345					350		
Ser	Ser	Gly	Lys	His	Asp	Phe	Ile	Gly	Glu	Phe	Thr	Ser	Thr	Phe	Gln

355	360	365
Glu Met Gln Glu Gly Thr Ala Asn Pro Gly Gln Glu Met Gln Trp Asp		
370	375	380
Cys Ile Asn Pro Lys Tyr Arg Asp Lys Lys Lys Asn Tyr Lys Asn Ser		
385	390	395
Gly Val Val Val Leu Ala Asp Leu Lys Phe His Arg Val Tyr Ser Phe		400
	405	410
Leu Asp Tyr Ile Met Gly Gly Cys Gln Ile Ser Phe Thr Val Ala Ile		415
	420	425
Asp Phe Thr Ala Ser Asn Gly Asp Pro Arg Ser Ser Gln Ser Leu His		430
	435	440
Tyr Ile Ser Pro Arg Gln Pro Asn His Tyr Leu Gln Ala Leu Arg Ala		445
	450	455
Val Gly Gly Ile Cys Gln Asp Tyr Asp Ser Asp Lys Arg Phe Pro Ala		460
465	470	475
Phe Gly Phe Gly Ala Arg Ile Pro Pro Asn Phe Glu Val Ser His Asp		480
	485	490
Phe Ala Ile Asn Phe Asn Pro Glu Asp Asp Glu Cys Glu Gly Ile Gln		495
	500	505
Gly Val Val Glu Ala Tyr Gln Asn Cys Leu Pro Arg Val Gln Leu Tyr		510
	515	520
Gly Pro Thr Asn Val Ala Pro Ile Ile Ser Lys Val Ala Glu Pro Ala		525
	530	535
Gln Arg Glu Gln Ser Thr Gly Gln Ala Thr Lys Tyr Ser Val Leu Leu		540
545	550	555
Val Leu Thr Asp Gly Val Val Ser Asp Met Ala Glu Thr Arg Thr Ala		560
	565	570
Ile Val Arg Ala Ser Arg Leu Pro Met Ser Ile Ile Ile Val Gly Val		575
	580	585
Gly Asn Ala Asp Phe Ser Asp Met Arg Leu Leu Asp Gly Asp Asp Gly		590
	595	600
Pro Leu Arg Cys Pro Arg Gly Glu Pro Ala Leu Arg Asp Ile Val Gln		605
	610	615
Phe Val Pro Phe Arg Glu Leu Lys Asn Ala Ser Pro Ala Ala Leu Ala		620
625	630	635
Lys Cys Val Leu Ala Glu Val Pro Lys Gln Val Val Glu Tyr Tyr Ser		640
	645	650
His Arg Gly Leu Pro Pro Arg Ser Leu Gly Val Pro Ala Gly Glu Ala		655
	660	665
Ser Pro Gly Cys Thr Pro		670
675		

<210> 3775

<211> 549

<212> DNA

<213> Homo sapiens

<400> 3775

gaattcgagg tcttgagaga ctgtgagagc cccaactcca ttagtattat gggcctcaat
60
acttccccggg ttgcaattac cctgaagccc caagacccta tggaacagaa cgtagctgag
120
ctgttgcaagt tctgctggt gaaggatcag agcaagtacc ctatccggga gtctgaaatg
180

cggaatata ttgttaaaga atatcgcaac cagtttcttg agataactcag gcgagcagca
 240
 gccacacttg agtgcatttt taggtttgaa ttgagagaac ttgacctga ggcacacacc
 300
 tacattctgt taaacaaact gggacctgtg ccctttgaag ggtagaaga gagcccaaat
 360
 gggccaaaga tgggcctcct gatgatgatt ctaggccaaa tttcctgaa tggcaaccaa
 420
 gccaaaggagg ctgagatttg ggaaatgctc tggaggatgg ggggtgcagcg ggaaaggagg
 480
 ctttccattt ttgggaaccc aaagagactt ctgtctgtgg agtttgtatg gcagcggttac
 540
 ttagactac
 549

<210> 3776

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3776

Glu	Phe	Glu	Val	Leu	Arg	Asp	Cys	Glu	Ser	Pro	Asn	Ser	Ile	Ser	Ile
1				5					10					15	
Met	Gly	Leu	Asn	Thr	Ser	Arg	Val	Ala	Ile	Thr	Leu	Lys	Pro	Gln	Asp
			20					25					30		
Pro	Met	Glu	Gln	Asn	Val	Ala	Glu	Leu	Leu	Gln	Phe	Leu	Leu	Val	Lys
		35					40					45			
Asp	Gln	Ser	Lys	Tyr	Pro	Ile	Arg	Glu	Ser	Glu	Met	Arg	Glu	Tyr	Ile
	50					55				60					
Val	Lys	Glu	Tyr	Arg	Asn	Gln	Phe	Pro	Glu	Ile	Leu	Arg	Arg	Ala	Ala
65					70				75					80	
Ala	His	Leu	Glu	Cys	Ile	Phe	Arg	Phe	Glu	Leu	Arg	Glu	Leu	Asp	Pro
			85						90					95	
Glu	Ala	His	Thr	Tyr	Ile	Leu	Leu	Asn	Lys	Leu	Gly	Pro	Val	Pro	Phe
			100					105					110		
Glu	Gly	Leu	Glu	Glu	Ser	Pro	Asn	Gly	Pro	Lys	Met	Gly	Leu	Leu	Met
	115						120					125			
Met	Ile	Leu	Gly	Gln	Ile	Phe	Leu	Asn	Gly	Asn	Gln	Ala	Lys	Glu	Ala
	130					135					140				
Glu	Ile	Trp	Glu	Met	Leu	Trp	Arg	Met	Gly	Val	Gln	Arg	Glu	Arg	Arg
145					150				155					160	
Leu	Ser	Ile	Phe	Gly	Asn	Pro	Lys	Arg	Leu	Leu	Ser	Val	Glu	Phe	Val
			165					170					175		
Trp	Gln	Arg	Tyr	Leu	Asp	Tyr									
			180												

<210> 3777

<211> 4915

<212> DNA

<213> Homo sapiens

<400> 3777

ngaggctaca agatcatagt tcatttaaag ccccatccc tgcaagtggg gctttctacc
 60

aatatgaatc ttttcaacct ggaccgtttt cgctttgaga aaaggaataa gattgaggaa
120
gcgcccgaag caaccctca accttcccag cctggccctt cttcaccaat ttctcttagt
180
gctgaagagg agaatgctga aggggaagtt agcagggcaa acactectga ttcagatata
240
actgaaaaaa cagaagattc tagtgttcca gaaactccag ataatgaaag aaaagcaagt
300
atatcatatt tcaaaaatca aagaggaata cagtatatgt atttgtcttc tgatagtga
360
gatgtcgttt ccccaaattg ctccaatata gttcaagaga aaacattcaa caaagatata
420
gtgattatag ttcttgagcc atctgaagat gaagagtccc aaggccttcc taccatggca
480
cgtagaaatg atgatatttc agaactggaa gacctttcgg aattggaaga ccttaaagat
540
gctaaacttc agactttgaa ggaacttttt ccacaaagaa gtgacaatga tttacttaag
600
ttgattgaat caacaagcac tatggatgga gcaattgctg ctgccttgct gatgtttggt
660
gatgcaggtg gtgggccag gaaaagaaaa ttatcttctt cttcagagcc atatgaggaa
720
gatgaattta atgatgatca atctataaaa aagacaagac tggatcatgg agaggaatca
780
aatgagtctg cagaatctag cagtaattgg gaaaagcagg aaagtattgt actgaaattg
840
caaaaggaat ttccaattt tgataaacag gaacttagag aagtactcaa ggaacatgaa
900
tggatgtaca cagaagcttt agaactctta aaagtgtttg cagaagacca agatatgcaa
960
tatgcatcac aaagtgaggt tccaaatgga aaagaagttt cttcaagaag tcaaaattac
1020
cctaaaaatg caactaaaac aaaactaaaa cagaaatttt caatgaaagc acaaaatggc
1080
tttaacaaga aacgtaaaaa aaatgttttt aatccaaaga gagttgttga agactctgaa
1140
tatgattcag gttctgatgt cggtagtcca ctagatgagg actatagtag tggatgaaga
1200
gtgatggagg atggctataa aggtaaaatt cttcacttcc ttcaagatgc ttcaattggt
1260
gaacttactt tgattcctca gtgttctcag aaaaaggctc agaagataac agaactccgg
1320
ccctttaata gttgggaggc tctgttcaca aagatgtcca aaactaatgg cttatcagaa
1380
gatttgatat ggcactgtaa aacactgac caagaaagag atgtagtat aaggcttatg
1440
aacaaatgtg aagacatttc aaataaattg accaaacaag ttaccatgct tactggaaat
1500
ggaggtggat ggaacataga acaaccttcc attctaaacc agagtttgtc actcaagccc
1560
tatcagaagg ttggtttgaa ttggctggca ttggtacata aacatggact taatggcatt
1620
ttggcagatg aaatgggcct aggaaaaact attcaagcca ttgcatttct ggcatacctc
1680

tatcaggagg gtaataatgg tcctcatttg atcgttgttc cagcttcaac tatagataac
1740
tgggtaaggg aagttaattt atgggtgccct actttgaagg tcctctgtta ctatggttct
1800
caagaagaac gtaaacaaat tagatttaac attcatagta gatatgaaga ttacaatgta
1860
attgtgacca catataactg tgcgatcagc agttctgatg atcgtagtct gtttcgacgg
1920
ctgaaactta attacgcaat ttttgatgag ggccatatgc tgaagaatat gggctccatt
1980
cgctaccagc accttatgac aattaatgca aataaccgtt tgctgctcac aggcacacct
2040
gtacagaaca atctgttaga actcatgtcg ctgttgaatt ttggttatgcc acacatgttt
2100
agtagtagca ccagtgaat acgaagaatg ttttcctcta agacaaaatc agcagatgag
2160
caaagcatat atgaaaagga gagaatagca catgcaaac aaattataaa gccatttatt
2220
ctcagaagag taaaagaaga ggttctcaag cagttacccc ccaagaaaga tcgaattgag
2280
ttgtgtgcaa tgcggagag gcaggagcaa ctctatttgg gtcttttcaa cagattgaaa
2340
aaatctatca ataacttggc cacagaaaaa aacacagaaa tgtgcaatgt catgatgcag
2400
ttgaggaaaa tggccaatca tcctttatta catcgccaat attacacagc tgaaaaactc
2460
aaggaaatgt ctcagcttat gctaaaggaa cctacacatt gtgaggctaa ccctgacctg
2520
atctttgaag atatggaagt tatgacagac ttcgaactac atgtactttg taaacagtac
2580
cgacacatta ataactttca gttagacatg gacttgattt tagattctgg aaaatttcga
2640
gttttaggat gcatcttgtc tgaattgaaa cagaaggggtg atagagttgt gttatttagc
2700
caatttacca tgatgctgga tatcttagag gttctattaa aacatcatca gcataggtac
2760
ctcagattag atggaaagac tcagatttct gaaaggatc atctaattga tgagtttaat
2820
accgatatgg atatctttgt gtttctgcta tcaacaaaag ctgggtggatt aggaataaat
2880
ctgacttcag caaatgttgt tatacttcac gatattgact gtaatcctta taatgacaaa
2940
caagcagaag atagatgcca tagagtaggc cagactaaag aagtactagt tataaaacta
3000
ataagccaag ggacgattga agaatccatg ctaaaaatta accaacagaa attgaaacta
3060
gaacaggata tgactacagt agatgaaggt gatgaaggga gtatgccagc agatatagcc
3120
acattactaa aaacatcaat gggcctgtga aataagaact gtgaactctc aattgatgag
3180
gaaatatcaa cttggtgcac tcaaggacat ttacattatg atgaccatgg ggtttatgaa
3240
catttataac tttttataat ttccatatta catttctcat agtatggaca actttttgcc
3300

actaactgaa ttctccaaat actcacacgt gaaatttcaa aaaagaagcc acaaatatgt
3360
agttctgaag atgttgaata atcattttac aaagcagttt tctgaatggg gattagttgg
3420
tgattgtttg taacaaatat gctaattgct tagaaatgtc agtatttttg taattatttc
3480
tacctccaaa tatatatata ttgtctttca ctggataatg tgtgtagatt tttacatgtg
3540
ccttatttga caatgcttat gtcttgtttt tgcttgcttc atttgaagtt cttttttatt
3600
atgttaaaga atgcagctgt atagattata tagctttcat tttattgcta tttgaagcag
3660
atgttcacca atgtcagcaa gaactcaacc tgaatttaaa ggtggcattc catatactaa
3720
catcccccag gtccctctca gtactcttgc tgaacaaaat ttatttggct aggcactaag
3780
ttgttttcca gtgaatagta actaaagaag cccctacctt gctccatgga ttaattcctt
3840
ctgttcattt tccaactgca ctaattgtgc atattactct gcctaactct gtgcatgttt
3900
tcattgattt cctctctccg gcttttgctt ctcttgaaac tgttgcccag tcacttctgc
3960
tccaattctc ttctctctca aatagtagtt tattactgcc acatctccat gcacagcaa
4020
aatgttgggtg acatttttct agcctggcag aacagattac ttaaagctat ttcatttcaa
4080
agcagactga atgtgacttc atctaaaggc agcattaggt actgcatgga aataggtcac
4140
taacttgaaa ctcttatcaa aatatatttt accagtttcc agaatttcca gtacaggacc
4200
gcctgaagag agagccattg ttcaattcca attcagtggt agtgacaaag tgaaatttag
4260
aagtgaagtt gtctatttga ttttaacte tttattaaat ctttctttaa atttctgcct
4320
gtcagtctat attgctgttt ttattatata tcagtttctt tgtataactt gtgagttcca
4380
tgtgttttgt ttttattatg taaatatcat tataaataaa cttatttata aatcaaagat
4440
ttgttaattt ttggaaatca tgcttttcaa agcatcctaa cttgctaaga tgctaggtag
4500
tacgaccctc tggatttgga aggcaaataa aactcttaca gtgattattt agatattaaa
4560
gactgagaac tcacggctta accccagtct tgatgggtata ttgaacagac tgaatatatt
4620
ttaccattac agggctaaaa ggagtcttca tgtgttaata ctacctcctt gtacatcact
4680
atacccaaat cagttattca aattgttagg aattttacct tttaaaatct cataatggat
4740
atctcatgtt ttctgtatta atgtatttcc aatgataggc tgtttctttt tttgttgta
4800
ttgttgttgt tgttatatcc atacttttat ctctaataaa atgtagtggg gttcttcctg
4860
taatgcgcta ttatgtcttg ggcttaataa aaatatttgt gatcataaaa aaaaa
4915

<210> 3778
 <211> 1049
 <212> PRT
 <213> Homo sapiens

<400> 3778

```

Xaa Gly Tyr Lys Ile Ile Val His Leu Lys Pro Pro Ser Leu Gln Val
 1          5          10          15
Val Leu Ser Thr Asn Met Asn Leu Phe Asn Leu Asp Arg Phe Arg Phe
 20          25          30
Glu Lys Arg Asn Lys Ile Glu Glu Ala Pro Glu Ala Thr Pro Gln Pro
 35          40          45
Ser Gln Pro Gly Pro Ser Ser Pro Ile Ser Leu Ser Ala Glu Glu Glu
 50          55          60
Asn Ala Glu Gly Glu Val Ser Arg Ala Asn Thr Pro Asp Ser Asp Ile
 65          70          75          80
Thr Glu Lys Thr Glu Asp Ser Ser Val Pro Glu Thr Pro Asp Asn Glu
 85          90          95
Arg Lys Ala Ser Ile Ser Tyr Phe Lys Asn Gln Arg Gly Ile Gln Tyr
100          105          110
Ile Asp Leu Ser Ser Asp Ser Glu Asp Val Val Ser Pro Asn Cys Ser
115          120          125
Asn Thr Val Gln Glu Lys Thr Phe Asn Lys Asp Thr Val Ile Ile Val
130          135          140
Ser Glu Pro Ser Glu Asp Glu Glu Ser Gln Gly Leu Pro Thr Met Ala
145          150          155          160
Arg Arg Asn Asp Asp Ile Ser Glu Leu Glu Asp Leu Ser Glu Leu Glu
165          170          175
Asp Leu Lys Asp Ala Lys Leu Gln Thr Leu Lys Glu Leu Phe Pro Gln
180          185          190
Arg Ser Asp Asn Asp Leu Leu Lys Leu Ile Glu Ser Thr Ser Thr Met
195          200          205
Asp Gly Ala Ile Ala Ala Ala Leu Leu Met Phe Gly Asp Ala Gly Gly
210          215          220
Gly Pro Arg Lys Arg Lys Leu Ser Ser Ser Ser Glu Pro Tyr Glu Glu
225          230          235          240
Asp Glu Phe Asn Asp Asp Gln Ser Ile Lys Lys Thr Arg Leu Asp His
245          250          255
Gly Glu Glu Ser Asn Glu Ser Ala Glu Ser Ser Ser Asn Trp Glu Lys
260          265          270
Gln Glu Ser Ile Val Leu Lys Leu Gln Lys Glu Phe Pro Asn Phe Asp
275          280          285
Lys Gln Glu Leu Arg Glu Val Leu Lys Glu His Glu Trp Met Tyr Thr
290          295          300
Glu Ala Leu Glu Ser Leu Lys Val Phe Ala Glu Asp Gln Asp Met Gln
305          310          315          320
Tyr Ala Ser Gln Ser Glu Val Pro Asn Gly Lys Glu Val Ser Ser Arg
325          330          335
Ser Gln Asn Tyr Pro Lys Asn Ala Thr Lys Thr Lys Leu Lys Gln Lys
340          345          350
Phe Ser Met Lys Ala Gln Asn Gly Phe Asn Lys Lys Arg Lys Lys Asn
355          360          365
Val Phe Asn Pro Lys Arg Val Val Glu Asp Ser Glu Tyr Asp Ser Gly

```

370					375					380					
Ser	Asp	Val	Gly	Ser	Ser	Leu	Asp	Glu	Asp	Tyr	Ser	Ser	Gly	Glu	Glu
385					390					395					400
Val	Met	Glu	Asp	Gly	Tyr	Lys	Gly	Lys	Ile	Leu	His	Phe	Leu	Gln	Asp
				405					410						415
Ala	Ser	Ile	Gly	Glu	Leu	Thr	Leu	Ile	Pro	Gln	Cys	Ser	Gln	Lys	Lys
				420				425					430		
Ala	Gln	Lys	Ile	Thr	Glu	Leu	Arg	Pro	Phe	Asn	Ser	Trp	Glu	Ala	Leu
				435			440					445			
Phe	Thr	Lys	Met	Ser	Lys	Thr	Asn	Gly	Leu	Ser	Glu	Asp	Leu	Ile	Trp
				450		455					460				
His	Cys	Lys	Thr	Leu	Ile	Gln	Glu	Arg	Asp	Val	Ile	Arg	Leu	Met	
465					470					475				480	
Asn	Lys	Cys	Glu	Asp	Ile	Ser	Asn	Lys	Leu	Thr	Lys	Gln	Val	Thr	Met
				485					490					495	
Leu	Thr	Gly	Asn	Gly	Gly	Gly	Trp	Asn	Ile	Glu	Gln	Pro	Ser	Ile	Leu
				500				505					510		
Asn	Gln	Ser	Leu	Ser	Leu	Lys	Pro	Tyr	Gln	Lys	Val	Gly	Leu	Asn	Trp
				515			520					525			
Leu	Ala	Leu	Val	His	Lys	His	Gly	Leu	Asn	Gly	Ile	Leu	Ala	Asp	Glu
						535					540				
Met	Gly	Leu	Gly	Lys	Thr	Ile	Gln	Ala	Ile	Ala	Phe	Leu	Ala	Tyr	Leu
545					550					555					560
Tyr	Gln	Glu	Gly	Asn	Asn	Gly	Pro	His	Leu	Ile	Val	Val	Pro	Ala	Ser
				565					570					575	
Thr	Ile	Asp	Asn	Trp	Leu	Arg	Glu	Val	Asn	Leu	Trp	Cys	Pro	Thr	Leu
				580				585					590		
Lys	Val	Leu	Cys	Tyr	Tyr	Gly	Ser	Gln	Glu	Glu	Arg	Lys	Gln	Ile	Arg
				595			600					605			
Phe	Asn	Ile	His	Ser	Arg	Tyr	Glu	Asp	Tyr	Asn	Val	Ile	Val	Thr	Thr
						615					620				
Tyr	Asn	Cys	Ala	Ile	Ser	Ser	Ser	Asp	Asp	Arg	Ser	Leu	Phe	Arg	Arg
625					630					635					640
Leu	Lys	Leu	Asn	Tyr	Ala	Ile	Phe	Asp	Glu	Gly	His	Met	Leu	Lys	Asn
				645					650					655	
Met	Gly	Ser	Ile	Arg	Tyr	Gln	His	Leu	Met	Thr	Ile	Asn	Ala	Asn	Asn
				660				665					670		
Arg	Leu	Leu	Leu	Thr	Gly	Thr	Pro	Val	Gln	Asn	Asn	Leu	Leu	Glu	Leu
				675			680					685			
Met	Ser	Leu	Leu	Asn	Phe	Val	Met	Pro	His	Met	Phe	Ser	Ser	Ser	Thr
				690			695				700				
Ser	Glu	Ile	Arg	Arg	Met	Phe	Ser	Ser	Lys	Thr	Lys	Ser	Ala	Asp	Glu
705					710					715					720
Gln	Ser	Ile	Tyr	Glu	Lys	Glu	Arg	Ile	Ala	His	Ala	Lys	Gln	Ile	Ile
				725					730						

aaagaaaaat ataaagtaaa agacaggata gaagaaaaaa caagagatgg aaaggacaga
 540
 ggacgagatt ttgaacgaca aagagaaaag agagacaagc caaggtctac ttccccagca
 600
 ggacagcatc attctcctat atcttctaga catcactcat ctctctcaca atcaggatca
 660
 tctattcaaa gacattctcc ttctcctcgt cgaaaaagaa ctctctcacc atcttatcag
 720
 cggacactaa ctccaccttt acgacgctct gcctctcctt atccttcaca ttctttgtcg
 780
 tctccccaga gaaagcagag tctccaaga catcgctctc caatgcgaga gaaagggaga
 840
 catgatcatg aacgaacttc acagtctcat gatcgacgcc acgaagggag ggaagatact
 900
 agggggcaaac gagacagaga aaaggactca agagaagaac gagaatatga acaggatcag
 960
 agctcttcta gagaccacag agatgacaga gaacctcgag atggtcggga tcggagagat
 1020
 gccagagata ctagggaccg aagggaaacta agagactcca gagacatgcg ggactcaagg
 1080
 gagatgagag attatagcag agataccaaa gagagccgtg atcccagaga ttctcggctc
 1140
 actcgtgatg cccatgacta cagggaccgt gaaggtcgag atactcatcg aaaggaggat
 1200
 acatatccag aagaatcccg gagttatggc cgaaaccatt tgagagaaga aagttctcgt
 1260
 acggaaaataa ggaatgagtc cagaaatgag tctcgaagtg aaattagaaa tgaccgaatg
 1320
 ggccgaagta gggggagggt tcttgagtta cctgaaaagg gaagtcgagg ctcaagagg
 1380
 tctcaaattg atagtcacag tagtaatagc aactatcatg acagctggga aactcgaagt
 1440
 agctatcctg aaagagatag atatcctgaa agagacaaca gagatcaagc aagggattct
 1500
 tcctttgaga gaagacatgg agagcgagac cgtcgtgacc agagagagag atcaaagacc
 1560
 aagctcacca attcgacatc agggaaggaa tgacgagctt gagcgtgatg aaagaagaga
 1620
 ggaacgaaga gtagacaggt ccattcaaga tctgggtcat ttgatagcag agacaggctt
 1680
 caagaacgag atcgatatga acacgacaga gagcgcgagn nagagaggag agatacagg
 1740
 cagagagaat gggaccgaga tgctgataaa gattggccac gcaacaggga tcgagataga
 1800
 ttgcgagaac gagaacgaga gagagaacga gacaaaagga gagacttggc tcg
 1853

<210> 3780

<211> 530

<212> PRT

<213> Homo sapiens

<400> 3780

His Arg Glu Lys Glu Asp Ile Lys Ile Thr Lys Glu Arg Thr Pro Glu

1	5	10	15
Ser Glu Glu Glu Asn Val Glu Trp Glu Thr Asn Arg Asp Asp Ser Asp			
20	25	30	
Asn Gly Asp Ile Asn Tyr Asp Tyr Val His Glu Leu Ser Leu Glu Met			
35	40	45	
Lys Arg Gln Lys Ile Gln Arg Glu Leu Met Lys Leu Glu Gln Glu Asn			
50	55	60	
Met Glu Lys Arg Glu Glu Ile Ile Ile Lys Lys Glu Val Ser Pro Glu			
65	70	75	80
Val Val Arg Ser Lys Leu Ser Pro Ser Pro Ser Leu Arg Lys Ser Ser			
85	90	95	
Lys Ser Pro Lys Arg Lys Ser Ser Pro Lys Ser Ser Ser Ala Ser Lys			
100	105	110	
Lys Asp Arg Lys Thr Ser Ala Val Ser Ser Pro Leu Leu Asp Gln Gln			
115	120	125	
Arg Asn Ser Lys Thr Asn Gln Ser Lys Lys Lys Gly Pro Arg Thr Pro			
130	135	140	
Ser Pro Pro Pro Pro Ile Pro Glu Asp Ile Ala Leu Gly Lys Lys Tyr			
145	150	155	160
Lys Glu Lys Tyr Lys Val Lys Asp Arg Ile Glu Glu Lys Thr Arg Asp			
165	170	175	
Gly Lys Asp Arg Gly Arg Asp Phe Glu Arg Gln Arg Glu Lys Arg Asp			
180	185	190	
Lys Pro Arg Ser Thr Ser Pro Ala Gly Gln His His Ser Pro Ile Ser			
195	200	205	
Ser Arg His His Ser Ser Ser Gln Ser Gly Ser Ser Ile Gln Arg			
210	215	220	
His Ser Pro Ser Pro Arg Arg Lys Arg Thr Pro Ser Pro Ser Tyr Gln			
225	230	235	240
Arg Thr Leu Thr Pro Pro Leu Arg Arg Ser Ala Ser Pro Tyr Pro Ser			
245	250	255	
His Ser Leu Ser Ser Pro Gln Arg Lys Gln Ser Pro Pro Arg His Arg			
260	265	270	
Ser Pro Met Arg Glu Lys Gly Arg His Asp His Glu Arg Thr Ser Gln			
275	280	285	
Ser His Asp Arg Arg His Glu Gly Arg Glu Asp Thr Arg Gly Lys Arg			
290	295	300	
Asp Arg Glu Lys Asp Ser Arg Glu Glu Arg Glu Tyr Glu Gln Asp Gln			
305	310	315	320
Ser Ser Ser Arg Asp His Arg Asp Asp Arg Glu Pro Arg Asp Gly Arg			
325	330	335	
Asp Arg Arg Asp Ala Arg Asp Thr Arg Asp Arg Arg Glu Leu Arg Asp			
340	345	350	
Ser Arg Asp Met Arg Asp Ser Arg Glu Met Arg Asp Tyr Ser Arg Asp			
355	360	365	
Thr Lys Glu Ser Arg Asp Pro Arg Asp Ser Arg Ser Thr Arg Asp Ala			
370	375	380	
His Asp Tyr Arg Asp Arg Glu Gly Arg Asp Thr His Arg Lys Glu Asp			
385	390	395	400
Thr Tyr Pro Glu Glu Ser Arg Ser Tyr Gly Arg Asn His Leu Arg Glu			
405	410	415	
Glu Ser Ser Arg Thr Glu Ile Arg Asn Glu Ser Arg Asn Glu Ser Arg			
420	425	430	
Ser Glu Ile Arg Asn Asp Arg Met Gly Arg Ser Arg Gly Arg Val Pro			

435 440 445
 Glu Leu Pro Glu Lys Gly Ser Arg Gly Ser Arg Gly Ser Gln Ile Asp
 450 455 460
 Ser His Ser Ser Asn Ser Asn Tyr His Asp Ser Trp Glu Thr Arg Ser
 465 470 475 480
 Ser Tyr Pro Glu Arg Asp Arg Tyr Pro Glu Arg Asp Asn Arg Asp Gln
 485 490 495
 Ala Arg Asp Ser Ser Phe Glu Arg Arg His Gly Glu Arg Asp Arg Arg
 500 505 510
 Asp Gln Arg Glu Arg Ser Lys Thr Lys Leu Thr Asn Ser Thr Ser Gly
 515 520 525
 Lys Glu
 530

<210> 3781

<211> 1364

<212> DNA

<213> Homo sapiens

<400> 3781

ctgagcacgt cccagctgga tctcgtctgc cactgtcacc catagcttct tccccatggt
 60
 gctttccatg tgtcacacac cactgactgtg acccaggggc ggggtcaaga gtagcctggg
 120
 gccaaagccct cccacccatg agcggagaag tcctccccag gcctcacctt gcttggcgca
 180
 tgggtccctcc catgagcttt gctttcagcc ttccagcttc ctccacaggg tggcagtggg
 240
 tgtaactcat ccattcatcc cttcatccct tcattcatcc actcacagcc aacagacgtt
 300
 tttaaaaaat tagccagtgc tatactagag ctggctccca aggaccgct accgcattgc
 360
 cttttgaaac aaaacaatga acacgttggg aaaggggccc tgcttgtgtg tcggtgacaa
 420
 ggcgagatcc ctgagtcagg tcaggcttgt agattcgagt tctgttgcca gtttgattgc
 480
 cctctgact ttgtccctg tacaactagg ttgattagga atcagccaac tgtgttcct
 540
 ggggtgctcg aaatcacagc ccatacctc gagaggccaa aatgagagcc aggggggtcc
 600
 aagatgagtg gctgcttctg gccgggagca gggtttcaag tcattagaac actctggcct
 660
 ttcttgaggg tgatcttggg gccattcctg cccctttcaa gaggagttaa tgcccagctc
 720
 tgttttagaga aaattggggg agatgattgc tcatgtgggt gataagaatc acctcccgtg
 780
 cagggtctg catagaacac tccataggca aacctgggtg tccaaggcac gtggcatttt
 840
 gcaaactctg ggtgcagctc cgagctgtcc tgcaggtccc agaccaggtg agaactccct
 900
 gagttcctgc tgccctgggc ggggggtgagg cataggtctt ggggggttaa cctggaattc
 960
 tgaatgtcat tcattgcatt ggagaggaag gagagtaggc aaagccaaga ccttgaact
 1020

ggacaaactc gtgtggttta aagtcactgt gagagctgga gttgagtctg cctacggggg
 1080
 aggactgcgg cacctacctc gcagggtgtg tgtgaggagc aatgtaaccg tgattttgaa
 1140
 ctgtgattct ggaaggcggtg tgtgcgtgtc cccgggggtg tgccagggga gtgaggagaa
 1200
 aaggccaggg agacagcctc actcaggcag ctgagtggga gagcatttat ctctaaacct
 1260
 ggaggggtat atgggtgggac aggaggaatt tgggcaggaa ctttcatgct aggggtttgg
 1320
 gggactcgct ggacaatgcc cctggacccc ccgggggtac gcgt
 1364

<210> 3782

<211> 112

<212> PRT

<213> Homo sapiens

<400> 3782

Met	Asn	Asp	Ile	Gln	Asn	Ser	Arg	Leu	Asn	Pro	Gln	Asp	Leu	Cys	Leu
1			5					10					15		
Thr	Pro	Asp	Pro	Gly	Ser	Arg	Asn	Ser	Gly	Ser	Ser	His	Leu	Val	Trp
			20				25					30			
Asp	Leu	Gln	Asp	Ser	Ser	Glu	Leu	His	Pro	Glu	Phe	Ala	Lys	Cys	His
		35				40					45				
Val	Pro	Trp	Thr	Pro	Arg	Phe	Ala	Tyr	Gly	Val	Phe	Tyr	Ala	Asp	Pro
	50				55				60						
Cys	Thr	Gly	Gly	Asp	Ser	Tyr	His	Pro	His	Glu	Gln	Ser	Ser	Pro	Pro
65				70				75						80	
Ile	Phe	Ser	Lys	Gln	Ser	Trp	Ala	Leu	Thr	Pro	Leu	Glu	Arg	Gly	Arg
			85				90						95		
Asn	Gly	Ser	Lys	Ile	Thr	Ser	Arg	Lys	Gly	Gln	Ser	Val	Leu	Met	Thr
			100				105						110		

<210> 3783

<211> 4137

<212> DNA

<213> Homo sapiens

<400> 3783

nncaaggcgc ctgcgactcg gtcccaggtc ggcggggcggc gcgcggcggg ctgcgcggg
 60
 ggccccggcg cgccggggcg cgcagtagc agcgcgcgga cccacgccac ggccaggagc
 120
 ccagagcagc gcggccacac tgcccagggtg tcggccctcg gccccggcgc tcggagcgcg
 180
 gcggctgcct gggctttaat ggctgctccg cggagcagcg cctagggctg gaaggcggct
 240
 gcggctcagg aagtcacccg agcaagcctc cttcggggcc ggccgcaccc gccgcggcgc
 300
 gctccatggg ggcgcgctcc ccccggggcg cccgctgacc cgggacgcgc gggcccgctc
 360
 gctcgccggc cgcgcgtccc ggccatgaac tgagcccgcg ggccagcccc gcgcctgctc
 420

cgcccgcgcc tttcttctcg cgctctctcc gcccgcgcc ggcgggcccg gctccccggg
480
ggctgcggcg ccccgggctc ggcgggccgc gggccccggg gcgcgggcg gcggcgggcg
540
ggggcgcgcg gctccgggcg cggcgccctgc accatgaact accagcagca gctggccaac
600
tcggctgcca tccggggcga gatccagcgc ttcgagtcgg tccaccccaa catctactcc
660
atctacgagc tgctggagcg cgtggaggag ccggtgctgc agaaccagat ccgggagcac
720
gtcatcgcca tcgaagatgc ctctgtgaac agccaggaat ggacgctgag tcgatctgtc
780
ccggagctca aagtgggaat tgtgggtaac ttggccagcg gcaagtctgc cctggtgcac
840
cggtagctga cgggcacata tgtccaggag gagtctccgg aaggtggcag gttcaagaaa
900
gagattgtcg ttgatggaca gagctatctg ctgctgatca gagatgaagg gggccccccg
960
gaggcgagcgt ttgcatgtg ggtggacgct gttatatttg tcttcagctt ggaggatgaa
1020
ataagtttcc agaccgttta ccaactactac agtcgaatgg ccaactatcg gaacacgagc
1080
gagattcttc tggttctggt gggaaaccag gatgccataa gttctgctaa cccgagggtc
1140
atcgatgacg ccagggcgag gaagctctcc aacgacctga aacggtgcac gtactacgag
1200
acgtgtgcta catacgggct gaatgtggag aggtctctcc aggacgttgc ccagaagatt
1260
gttgccacaa ggaagaagca gcagctgtcc ataggacct gcaagtcgct acctaatctt
1320
cccagccatt cctccgtctg ttcgcgcgag gtgtctgccg tgcacatcag ccagacaagt
1380
aatggaggtg ggagtttaag cgactattcc tcctccgttc catcgactcc cagcaccagc
1440
cagaaggaac ttcggatcga tgttctctcc actgccaaca cggccacgcc cgttcgcaag
1500
cagtctaagc gccggtccaa cctgttcacc tctcgaaaag ggagcgaccc agacaaagag
1560
aagaaaggcc tggagagtcg tgcggacagc attgggagcg gccgagccat cccaattaaa
1620
cagggcatgc tgttgaagcg aagtggcaaa tcgttgaata aagagtggaa aaagaaatat
1680
gtcaccctgt gtgacaatgg cgtgctgacc tatcatccca gtttacatga ttacatgcag
1740
aatgttcatg gtaaggagat tgaccttctg agaaccactg tgaaagtccc aggggaagagg
1800
ccaccccgag ccacgtcagc ctgcgcaccc atctccagcc ctaaaaccaa tggcctatcc
1860
aaggacatga gcagtttaca catctcacc c aattcagaca cagggctggg tgactccgta
1920
tgctccagcc ccagtatctc cagcaccacc agccccaagc tcgacccgcc cccctcccct
1980
cacgccaaca gaaagaagca ccgaaggaag aaaagcacta gcaacttcaa agccgacggc
2040

ctgtccggca ctgctgaaga acaagaagaa aattttgagt ttatcattgt gtccctcact
2100
ggccaaacat ggcactttga agccacgacg tatgaggagc gggacgcctg ggtccaagcc
2160
atcgagagcc agatcctggc cagcctgcag tegtgcgaga gcagcaagaa caagtcccgg
2220
ctgacgagcc agagcgaggc catggccctg cagtccgatcc ggaacatgcg cgggaactcc
2280
cactgtgtgg actgcgagac ccagaatccc aactgggcca gtttgaactt gggagccctc
2340
atgtgcatcg aatgtctcagg gatccaccgg aatcttgga cccacctttc ccgagtccga
2400
tctctggacc tggatgactg gccaatcgag ctcatcaagg tgatgtcatc catcggaac
2460
gagctagcca acagcgtctg ggaagagagc agccaggggc ggacgaaacc atcggtagac
2520
tccacaaggg aagagaagga acggtggatc cgtgccaaagt acgagcagaa gctcttctcg
2580
gccccgctgc cctgcacgga gctgtccctg ggccagcacc tgctgcgggc caccgccgac
2640
gaggacctgc ggacggccat cctgctgctg gcacacggct cccgggacga ggtgaacgag
2700
acctgcgggg agggagacgg ccgcacggcg ctgcatctgg cctgccgcaa ggggaatgtg
2760
gtcctggcgc agctcctgat ctggtacgga gtggacgtca cggcccgaga tgcccacggg
2820
aacacagctc tggcctacgc ccggcaggcc tccagccagg agtgcatcga cgtgctgctg
2880
cagtacggct gccccgacga gcgcttcgtg ctcatggcca cccctaacct gtccaggaga
2940
aacaataacc ggaacaacag cagtgggagg gtgcccacca tcatctgagg aacagccgtg
3000
cccgcctgct cgccgcacct gggacgcggc agcctcgccg cattctcgct cagaagtgcg
3060
agcacgtgag tcccgtcgca tccccctcct ctctctggtg gccacctccc tcccggccac
3120
ccactctcac cccaaacaaa atcacaaaac ctggacatcc ctcaaggggc gaagaggcgg
3180
ccgggagact gcagaagtgg ctctttttca taaactcccc taaaccacac acaggagaga
3240
gcgacgggcc tcggcccttt gatgatagca catggcgag gacccttgtc ctggtggcac
3300
aagggatggg gacgcgaggg ggaggggagg cgaggaacaa ggagaagggg caactttcct
3360
taactggcag ttgagcacat agtacatttc ccctctacca aacggaacac ttggattcca
3420
tctcttctct gaggagctcg acggcataaa tcagaagcaa gcacagagtt tgtcaggttt
3480
gaagccccta tgatggtgtg tgtcaaatca gttgtagcta atctgtccag ggagaatact
3540
ggcttcatta cacttgtaca gccgagttct tcccgcatta ctgctgttta atagaacgtg
3600
attagtcac gccgagaaga aagcatatta gccgaggagg tagtcacgcg gcacgcgccg
3660

gtgattgcc aagatgtgatt gcaatactct tagaagcacc atattatccc agacatgttc
 3720
 tttcaagccc ttggagccct ctctaaattc actgtcatca tttagtatct gtttaatttt
 3780
 tcagtccaaa gagaggaaat cagtcgctga gtattatttg actccggtct ccttggtgca
 3840
 aaaacaaaat gggaaaaata aataagaata actcagaaac tcaaaaggaa accacaaatt
 3900
 cagctaataa tagcatttcg agtatatttc gtaaactaag gaaatacaca aaaggctgtt
 3960
 ttttccgact gtaagagata ttgatgtcc ttttgccgag gtggatgtgt tagtctcagg
 4020
 ccctcctgga ccacgttgcc caagtcacac aggtctctgt gttatgtatt tagataagat
 4080
 gtgtgaaaat atatttgaat aaaagaagtt cataaaaaaa aaaaaaaaaa aaaaaaa
 4137

<210> 3784

<211> 804

<212> PRT

<213> Homo sapiens

<400> 3784

Met	Asn	Tyr	Gln	Gln	Gln	Leu	Ala	Asn	Ser	Ala	Ala	Ile	Arg	Ala	Glu
1				5					10					15	
Ile	Gln	Arg	Phe	Glu	Ser	Val	His	Pro	Asn	Ile	Tyr	Ser	Ile	Tyr	Glu
			20					25					30		
Leu	Leu	Glu	Arg	Val	Glu	Glu	Pro	Val	Leu	Gln	Asn	Gln	Ile	Arg	Glu
		35					40					45			
His	Val	Ile	Ala	Ile	Glu	Asp	Ala	Phe	Val	Asn	Ser	Gln	Glu	Trp	Thr
	50					55				60					
Leu	Ser	Arg	Ser	Val	Pro	Glu	Leu	Lys	Val	Gly	Ile	Val	Gly	Asn	Leu
65					70				75					80	
Ala	Ser	Gly	Lys	Ser	Ala	Leu	Val	His	Arg	Tyr	Leu	Thr	Gly	Thr	Tyr
			85					90						95	
Val	Gln	Glu	Glu	Ser	Pro	Glu	Gly	Gly	Arg	Phe	Lys	Lys	Glu	Ile	Val
		100					105						110		
Val	Asp	Gly	Gln	Ser	Tyr	Leu	Leu	Ile	Arg	Asp	Glu	Gly	Gly	Pro	
	115					120				125					
Pro	Glu	Ala	Gln	Phe	Ala	Met	Trp	Val	Asp	Ala	Val	Ile	Phe	Val	Phe
	130				135					140					
Ser	Leu	Glu	Asp	Glu	Ile	Ser	Phe	Gln	Thr	Val	Tyr	His	Tyr	Tyr	Ser
145				150					155					160	
Arg	Met	Ala	Asn	Tyr	Arg	Asn	Thr	Ser	Glu	Ile	Pro	Leu	Val	Leu	Val
		165						170						175	
Gly	Thr	Gln	Asp	Ala	Ile	Ser	Ser	Ala	Asn	Pro	Arg	Val	Ile	Asp	Asp
		180					185						190		
Ala	Arg	Ala	Arg	Lys	Leu	Ser	Asn	Asp	Leu	Lys	Arg	Cys	Thr	Tyr	Tyr
	195					200				205					
Glu	Thr	Cys	Ala	Thr	Tyr	Gly	Leu	Asn	Val	Glu	Arg	Val	Phe	Gln	Asp
	210				215					220					
Val	Ala	Gln	Lys	Ile	Val	Ala	Thr	Arg	Lys	Lys	Gln	Gln	Leu	Ser	Ile
225				230					235					240	
Gly	Pro	Cys	Lys	Ser	Leu	Pro	Asn	Ser	Pro	Ser	His	Ser	Ser	Val	Cys

245 250 255
 Ser Ala Gln Val Ser Ala Val His Ile Ser Gln Thr Ser Asn Gly Gly
 260 265 270
 Gly Ser Leu Ser Asp Tyr Ser Ser Val Pro Ser Thr Pro Ser Thr
 275 280 285
 Ser Gln Lys Glu Leu Arg Ile Asp Val Pro Pro Thr Ala Asn Thr Pro
 290 295 300
 Thr Pro Val Arg Lys Gln Ser Lys Arg Arg Ser Asn Leu Phe Thr Ser
 305 310 315 320
 Arg Lys Gly Ser Asp Pro Asp Lys Glu Lys Lys Gly Leu Glu Ser Arg
 325 330 335
 Ala Asp Ser Ile Gly Ser Gly Arg Ala Ile Pro Ile Lys Gln Gly Met
 340 345 350
 Leu Leu Lys Arg Ser Gly Lys Ser Leu Asn Lys Glu Trp Lys Lys Lys
 355 360 365
 Tyr Val Thr Leu Cys Asp Asn Gly Val Leu Thr Tyr His Pro Ser Leu
 370 375 380
 His Asp Tyr Met Gln Asn Val His Gly Lys Glu Ile Asp Leu Leu Arg
 385 390 395 400
 Thr Thr Val Lys Val Pro Gly Lys Arg Pro Pro Arg Ala Thr Ser Ala
 405 410 415
 Cys Ala Pro Ile Ser Ser Pro Lys Thr Asn Gly Leu Ser Lys Asp Met
 420 425 430
 Ser Ser Leu His Ile Ser Pro Asn Ser Asp Thr Gly Leu Gly Asp Ser
 435 440 445
 Val Cys Ser Ser Pro Ser Ile Ser Ser Thr Thr Ser Pro Lys Leu Asp
 450 455 460
 Pro Pro Pro Ser Pro His Ala Asn Arg Lys Lys His Arg Arg Lys Lys
 465 470 475 480
 Ser Thr Ser Asn Phe Lys Ala Asp Gly Leu Ser Gly Thr Ala Glu Glu
 485 490 495
 Gln Glu Glu Asn Phe Glu Phe Ile Ile Val Ser Leu Thr Gly Gln Thr
 500 505 510
 Trp His Phe Glu Ala Thr Thr Tyr Glu Glu Arg Asp Ala Trp Val Gln
 515 520 525
 Ala Ile Glu Ser Gln Ile Leu Ala Ser Leu Gln Ser Cys Glu Ser Ser
 530 535 540
 Lys Asn Lys Ser Arg Leu Thr Ser Gln Ser Glu Ala Met Ala Leu Gln
 545 550 555 560
 Ser Ile Arg Asn Met Arg Gly Asn Ser His Cys Val Asp Cys Glu Thr
 565 570 575
 Gln Asn Pro Asn Trp Ala Ser Leu Asn Leu Gly Ala Leu Met Cys Ile
 580 585 590
 Glu Cys Ser Gly Ile His Arg Asn Leu Gly Thr His Leu Ser Arg Val
 595 600 605
 Arg Ser Leu Asp Leu Asp Asp Trp Pro Ile Glu Leu Ile Lys Val Met
 610 615 620
 Ser Ser Ile Gly Asn Glu Leu Ala Asn Ser Val Trp Glu Glu Ser Ser
 625 630 635 640
 Gln Gly Arg Thr Lys Pro Ser Val Asp Ser Thr Arg Glu Glu Lys Glu
 645 650 655
 Arg Trp Ile Arg Ala Lys Tyr Glu Gln Lys Leu Phe Leu Ala Pro Leu
 660 665 670
 Pro Cys Thr Glu Leu Ser Leu Gly Gln His Leu Leu Arg Ala Thr Ala

675	680	685
Asp Glu Asp Leu Arg Thr Ala Ile Leu Leu Leu Ala His Gly Ser Arg		
690	695	700
Asp Glu Val Asn Glu Thr Cys Gly Glu Gly Asp Gly Arg Thr Ala Leu		
705	710	715
His Leu Ala Cys Arg Lys Gly Asn Val Val Leu Ala Gln Leu Leu Ile		
	725	730
Trp Tyr Gly Val Asp Val Thr Ala Arg Asp Ala His Gly Asn Thr Ala		
	740	745
Leu Ala Tyr Ala Arg Gln Ala Ser Ser Gln Glu Cys Ile Asp Val Leu		
	755	760
Leu Gln Tyr Gly Cys Pro Asp Glu Arg Phe Val Leu Met Ala Thr Pro		
	770	775
Asn Leu Ser Arg Arg Asn Asn Asn Arg Asn Asn Ser Ser Gly Arg Val		
785	790	795
Pro Thr Ile Ile		800

<210> 3785

<211> 1901

<212> DNA

<213> Homo sapiens

<400> 3785

```

tttttttttt tttttttttt tttttttttt tttttttttt ttctggtcaa actccctttt
60
tattaaggggt tatcaagctg tacacgggtcc ctaccctgct ccgctccgag ttcgggcagc
120
gcaattcacc actctcccaa agccggacca cagctgggtg aggggtggga cagagagtag
180
gagcagtcctc agcatgcagt gcagcagccc aaagcctcgg gcgaggcatc gcccttcac
240
ccccttcagg gcacagcgag atgcgggcca gagctctttt gctgggacgt acacagccaa
300
ggtcaccctc cagcccggtc tgtcccatgt gcaggtgatg gggggtacga taagcagcaa
360
tgagggccca ggaagacctc agtctcctgg gggcccatcc taaaagatgg caagggcagc
420
aaagtatttc catcctgctc ctacaattta gaaaccttct tttttagtgt caaaatatag
480
cgttgagggg agctggacgc tagggctctc accctaacgc aaagcaaaag ccgaacggaa
540
cgggagcaag cgaacagaac aggagcaagc agcacacaca ggccagtgat gtgcaagaag
600
cggagagagg tgagccggct gcagcactgg gcgagaactg cgggtgaggt aagggccaca
660
gcctgacctg ctcacttatt gagggggcta ggaaggttg caggggttga gggccaggc
720
ccaacctccc cactccacag ttggcacagg ttctcctgct ttggcagctt ctatcgtggg
780
cagccctctg gggacttgca ggggtaggtg taaaggtggc agtactgggg ctgggctggg
840
gaccagtctc tagcaccaca ctctgagcca agggggtcct ggggatgagg ctagagtccc
900

```

gtgtgccctc gggtccatagg ccccaaattc ctctcctggg gctgtggcaa gcccagtggt
 960
 ggcacctccc ttggccaggc acagacacac aaacaccaca cacgtggggc cagggaaacac
 1020
 tcagaggagc cgtcccatgg caggcagacg ggatggcagg gcagcgggtgg cctccatcct
 1080
 gggccacagg aaccctgctc agccttgtct ataccttgtg cacctgaggg ggtagctcat
 1140
 cctccgagcc ctcttcgggc acgggctcag ggtgccttga tgccgactgc ccatcttctg
 1200
 cccaccctcc aagaggcagc cgagagaaat gagaggggaac cctggggcact gtgccaggat
 1260
 ctgtgatgcc accgtagcgc ctctggaagc ccccatgcag ggcgggtggtc tcaggagctc
 1320
 caggccgggg tgctgcacag ggatagctag cagagcgagg gatagactgg gggggccggg
 1380
 cgccctctcc cccttcacga ggggcgcttt ctccactctc atcactctcc cggcgggtgc
 1440
 atacatgccg ctcagggtca gcctgggcct gctgcttgtg gagctggtgc atatagaggg
 1500
 catgcaggct catctctgtg gatgcatatt ctgacagcac caggctctgc agctgtcctt
 1560
 cccacacgct gctcccgagg ctggctgtcc tggcatccac ccagagcct gtcattggtgc
 1620
 tgttagcccc gcctgtgggc gcctgcccgg gttgcagcgg ggagaaggag cgcagggcag
 1680
 aggcgacttc agccctgtgc ctggagccct gcaggctctc gggcagtga gggccccggc
 1740
 aggatgagcc agctaccaca ttgcgataa ggctcagggg ctcagactca gattgtaagg
 1800
 actgataga cgtaaagagg gcattttcag ggagcagacc cccttgggcg aggctagcag
 1860
 ctgctccatc ccgtgaacc tgctccttga ggaagcctag g
 1901

<210> 3786

<211> 168

<212> PRT

<213> Homo sapiens

<400> 3786

Met	Thr	Gly	Ser	Gly	Val	Asp	Ala	Arg	Thr	Ala	Ser	Ser	Gly	Ser	Ser
1				5					10				15		
Val	Trp	Glu	Gly	Gln	Leu	Gln	Ser	Leu	Val	Leu	Ser	Glu	Tyr	Ala	Ser
			20					25				30			
Thr	Glu	Met	Ser	Leu	His	Ala	Leu	Tyr	Met	His	Gln	Leu	His	Lys	Gln
		35					40				45				
Gln	Ala	Gln	Ala	Glu	Pro	Glu	Arg	His	Val	Trp	His	Arg	Arg	Glu	Ser
	50					55				60					
Asp	Glu	Ser	Gly	Glu	Ser	Ala	Pro	Asp	Glu	Gly	Gly	Glu	Gly	Ala	Arg
65					70				75			80			
Ala	Pro	Gln	Ser	Ile	Pro	Arg	Ser	Ala	Ser	Tyr	Pro	Cys	Ala	Ala	Pro
			85					90				95			
Arg	Pro	Gly	Ala	Pro	Glu	Thr	Thr	Ala	Leu	His	Gly	Gly	Phe	Gln	Arg

```

          100          105          110
Arg Tyr Gly Ile Thr Asp Pro Gly Thr Val Pro Arg Val Pro Ser
      115          120          125
His Phe Ser Arg Leu Pro Leu Gly Trp Ala Glu Asp Gly Gln Ser
      130          135          140
Ala Ser Arg His Pro Glu Pro Val Pro Glu Glu Gly Ser Glu Asp Glu
145          150          155          160
Leu Pro Pro Gln Val His Lys Val
          165

```

<210> 3787

<211> 717

<212> DNA

<213> Homo sapiens

<400> 3787

```

gcgtttgtcc agtattattc aaatgaccgg acataatgaa ggatggcgac aggacgaagg
60
cttctgccct aagatttctc tcatctcggt ttaccatct tgtcttcgtg gccctcactt
120
gtgggtgtgt ctgctgtggt gttatggaca ctgctagtgt taatacagca caataagaaa
180
gtgtgaaagg ggccgggaaa ggtggcgagg gcggggcggc acgtgggttc ccctcacagc
240
actgtgcacg gtgcctgctt gggttcctcc atgtggacca gcaccgctga gcggccactc
300
tgcgccaggc actgttcacg ggtgatcacg gcagccccct tattacagac aagcaaactg
360
gggcttagcc agctcaggag gctcgcaggt aggtggggga gcctggagct gaacccaggc
420
gtctgaccca ggtgctcccc cttagccacc tgcctccatg agcacttggc accccagggc
480
cccgggggtg ctgcacgtga gccgtggcgt agcttaatcg acgcgcacaa ggattccgtg
540
tattcagtgt ttattgaggc tgtgttttga agcatgccat tgatagggtg aacataacat
600
ttttcttaga ataaaagcac attccataca ctctactgtg gcagaataag gaggttcaca
660
gataattgag agaagctacc gaaacgtgct gttttctgaa ggtctccctt cagcgt
717

```

<210> 3788

<211> 113

<212> PRT

<213> Homo sapiens

<400> 3788

```

Met Leu Gln Asn Thr Ala Ser Ile Asn Thr Glu Tyr Thr Glu Ser Leu
 1          5          10          15
Cys Ala Ser Ile Lys Leu Arg His Gly Ser Arg Ala Ala Pro Pro Gly
      20          25          30
Pro Trp Gly Ala Lys Cys Ser Trp Arg Gln Val Ala Lys Gly Glu His
      35          40          45
Leu Gly Gln Thr Pro Gly Phe Ser Ser Arg Leu Pro His Leu Pro Ala

```

50		55		60	
Ser	Leu	Leu	Ser	Trp	Leu
65		70		75	
Ala	Ala	Val	Ile	Thr	His
		85		90	
Ala	Val	Leu	Val	His	Met
		100		105	
Leu					

<210> 3789

<211> 4341

<212> DNA

<213> Homo sapiens

<400> 3789

```

ngaattcatt ttcaaaggag gcgaactacc tgtgccctaa ccttgggaagc tggagaaaag
60
ttactgtctca caactgacct gaaaactaaa gagtctgtgg gtaggagaat cagtcaactt
120
caggacagct ggaaagacat ggagccccag ctggcagaga tgattaagca gttccagagc
180
actgtagaga cctgggacca gtgtgaaaag aaaatcaagg agttgaaaag caggctgcaa
240
gttttaaagg cacaaagtga agatcctctt ccagagcttc acgaggacct ccataacgaa
300
aaagagctga ttaaggaact agaacagtct ttggctagct ggactcagaa cttgaaagaa
360
cttcaaaacta tgaaggcgga cttaaacccg cacttctctg tggaagatgt gatggttttg
420
aaggagcaaa tagagcattt gcacagacaa tgggaggacc tctgcttaag ggtggccata
480
cgtaaacagg agattgaaga cagactcaat acatgggttg tattcaatga aaaaaataaa
540
gagttgtgtg cctggctggt gcagatggaa aacaaagttc tacagacagt ggacattagt
600
attgaagaaa tgattgaaaa gttacagaag gactgcatgg aagaaataaa cttgtttagt
660
gaaaacaagt tacagttaaa gcagatgggt gaccagttag tcaaggccag caacaaatca
720
agagcagctg agatcgatga caagctcaac aaaattaacg atcgttggca acatcttttt
780
gatgtcatcg gatcaagggt gaagaagctg aaggagacct ttgcttttat tcagcagttg
840
gacaaaaaca tgagcaacct tcgcacctgg ttggctcgaa ttgagtctga gctttccaag
900
cctgttgttt atgatgtctg cgatgatcaa gagatccaga agaggctcgc tgagcagcag
960
gatctacagc gagatattga acaacacagc gcaggggtgg agtccgtgtt taacatctgt
1020
gacgtcctac tgcacgactc cgatgcctgt gcaaatgaga ccgagtgtga ctcgatccag
1080
cagaccacca ggagcctgga cagacgctgg aggaacattt gtgccatgtc catggagcgg
1140

```

cgcatgaaaa tcgaggagac gtggcgctg tggcagaagt ttttagacga ctattctcgc
1200
tttgaggact ggctcaagtc agctgagagg acggcagcct gcccaaattc ctcagaggctg
1260
ttgtacacga gtgccaaaga ggaactgaag aggtttgagg cctttcagcg gcagattcat
1320
gagcggctca ctcagctgga gctcatcaac aagcagtacc ggcggtggc ccgggagaac
1380
cgcacagaca cggccagcag gctgaagcag atggtccacg agggcaacca gcgctgggac
1440
aaccttcaga ggcggtcac agccgtcctg cggagactca ggcatttcac caaccagagg
1500
gaagaatttg agggcaccag ggagagcatt ctggtgtggc tcacagagat ggacctgcag
1560
ctgaccaacg tggagcactt ctcagagagt gacgcgatg acaagatgcg ccaactgaat
1620
ggcttccaac aggaaattac attaaatacc aacaagattg atcagctcat tgtgtttggg
1680
gagcagctga ttcagaagag cgagcccctg gatgctgtgc tgattgagga tgagctggag
1740
gaactccacc gctactgcca ggaggtgttt ggaaggtct cccggttcca ccggcggtc
1800
acctcctgca ctccgggctt ggaagatgaa aaggaggcct ctgagaatga aacagacatg
1860
gaagacccca gagaaatcca gactgattct tggcgtaaac ggggagagag cgaggaaccg
1920
tcattctctc agtcctctgtg tcattctagt gccccagggc acgagcggtc tggctgcgag
1980
acctctgtca gcgtggactc catccccctg gagtgggacc acacaggcga cgtggggggc
2040
tcctctctc acgaagagga cgaggagggc ccatactaca gcgcactgtc aggtaaatcc
2100
atttcggatg gccactcgtg gcatgttccc gacagccctt cctgtccga gcatcactac
2160
aagcaaatgg aaggtgacag gaatgttcca cctgttcccc ctgcgtccag cacccttat
2220
aaaccacct atggaaagct actattacct ccaggcacgg atggtggcaa agaaggcccg
2280
cgagtcctga atggcaaccc acagcaggaa gacgggggac tggccggtat cacagagcag
2340
cagtcaggtg ctttcgacag atgggagatg attcaagcac aggagcttca caataagctc
2400
aaaataaaaac aaaatttgca acagctgaac tctgatatca gcgccatcac tacttggctg
2460
aaaaaaactg aagcagagct ggaaatgtta aagatggcaa agcctccctc tgatatccag
2520
gaaatagaac tgagagtga gagactgcag gagatactga aagcctttga cacttacaag
2580
gcattagtgg tctctgtcaa cgtgagcagc aaggaatttc tgcaaaccga gagccccgaa
2640
tccacagagc tccaaagtag actccgccag ctgagcctgc tctgggaagc agcacagggc
2700
gcagtggaca gctggagagg gggcttacga cagtcgctca tgcagtgcc ggacttccac
2760

cagttgagtc aaaatctgct gctgtggtta gcgagtgcc aagaaccggag gcagaaggct
2820
catgtcaccg atccaaaggc agacccccgg gctctcctag agtgtcggag ggaactaatg
2880
caactggaaa aggagctggt agaacgtcaa cctcaagtgg acatgttaca ggagatttca
2940
aacagccttc tcattaaggg acatggagaa gactgtattg aagctgaaga aaaggtgcat
3000
gttattgaga agaaactcaa acagttacgg gagcaagtgt cccaagattt aatggccttg
3060
caggaaccc agaaccagc ctcacccctg ccagcttcg acgaggtaga ctggggggac
3120
cagcctcctg caacatccgt gccagctccc cgagcaaagc agttcagagc agtgagaact
3180
acagaaggcg aggaggagac agagagcagg gtccccggca gcacacggcc acagcgctcc
3240
ttcctctcaa ggggtggtccg ggcagcccta cccctgcagc tgctcctcct gctgctgctg
3300
ctcctggcct gcctgctgcc ctcctccgaa gaagactaca gctgcactca ggccaacaac
3360
tttggccggg ccttttacc catgctgagg tacaccaatg ggccaccccc cacatagagg
3420
gcatagctgg ccacagtgt acaccacctg cctgattgcc aaggggtgcc agcacgtggc
3480
cccagaccaa tctgagtgc ttagtggttg caagggtccc ggacctgtgc agacttcttc
3540
tgggcttacc cagcacgggc tccttgagc ccagggcagc tttcagattg tgttcctccc
3600
caggagcagg gaacctgtgt ggcagggtgcc ccgggtatct tggcagaact agttgattag
3660
tttagggatc tctggaaatg tcagtttctt gaagagccaa gcactttgtg aattctggtt
3720
tgtttgtaaa acagcattat tataatgtag gtatgggtcaa tgagcagtgg tgtccatcac
3780
atatattata gaagcaagcg agcacattcc accctagaaa tgggttcagaa actcataggc
3840
acccttagct gatggaaaca atcaatcata ttttaatacgc ttagaatcag ttttactcca
3900
atcagctggc aattttgagc tgccgggttat acaccaaagt gttctgttca gtacctagct
3960
ctgctctttt atattgcttt aaatttttaa agaaattata ttgcatggat gtggttattt
4020
gtgcatattt ttttaacaatg cccaatctgt atgaataatg taaacttcga ttttttttta
4080
aaaaaattag attttagctg gagcttttga ctaatgtaaa gtaaatgcc aactaccgac
4140
ttgataggga tgtttttgta agttaatttt ctaagacttt ttcacatcca aagtgatgct
4200
ttgctttggg ttttaactgt ttggccacgg cgggggtggg ggcggggggg tggtagagaa
4260
acttgaagct gtttgtgata tgtacaactc agatgtttct cattaaaaaa caaaattagc
4320
cagaaaaaaa aaaaaaaaaa a
4341

<210> 3790

<211> 1092

<212> PRT

<213> Homo sapiens

<400> 3790

```

Met Glu Pro Gln Leu Ala Glu Met Ile Lys Gln Phe Gln Ser Thr Val
 1              5              10              15
Glu Thr Trp Asp Gln Cys Glu Lys Lys Ile Lys Glu Leu Lys Ser Arg
      20              25              30
Leu Gln Val Leu Lys Ala Gln Ser Glu Asp Pro Leu Pro Glu Leu His
      35              40              45
Glu Asp Leu His Asn Glu Lys Glu Leu Ile Lys Glu Leu Glu Gln Ser
      50              55              60
Leu Ala Ser Trp Thr Gln Asn Leu Lys Glu Leu Gln Thr Met Lys Ala
      65              70              75              80
Asp Leu Thr Arg His Val Leu Val Glu Asp Val Met Val Leu Lys Glu
      85              90              95
Gln Ile Glu His Leu His Arg Gln Trp Glu Asp Leu Cys Leu Arg Val
      100             105             110
Ala Ile Arg Lys Gln Glu Ile Glu Asp Arg Leu Asn Thr Trp Val Val
      115             120             125
Phe Asn Glu Lys Asn Lys Glu Leu Cys Ala Trp Leu Val Gln Met Glu
      130             135             140
Asn Lys Val Leu Gln Thr Val Asp Ile Ser Ile Glu Glu Met Ile Glu
      145             150             155             160
Lys Leu Gln Lys Asp Cys Met Glu Glu Ile Asn Leu Phe Ser Glu Asn
      165             170             175
Lys Leu Gln Leu Lys Gln Met Gly Asp Gln Leu Ile Lys Ala Ser Asn
      180             185             190
Lys Ser Arg Ala Ala Glu Ile Asp Asp Lys Leu Asn Lys Ile Asn Asp
      195             200             205
Arg Trp Gln His Leu Phe Asp Val Ile Gly Ser Arg Val Lys Lys Leu
      210             215             220
Lys Glu Thr Phe Ala Phe Ile Gln Gln Leu Asp Lys Asn Met Ser Asn
      225             230             235             240
Leu Arg Thr Trp Leu Ala Arg Ile Glu Ser Glu Leu Ser Lys Pro Val
      245             250             255
Val Tyr Asp Val Cys Asp Asp Gln Glu Ile Gln Lys Arg Leu Ala Glu
      260             265             270
Gln Gln Asp Leu Gln Arg Asp Ile Glu Gln His Ser Ala Gly Val Glu
      275             280             285
Ser Val Phe Asn Ile Cys Asp Val Leu Leu His Asp Ser Asp Ala Cys
      290             295             300
Ala Asn Glu Thr Glu Cys Asp Ser Ile Gln Gln Thr Thr Arg Ser Leu
      305             310             315             320
Asp Arg Arg Trp Arg Asn Ile Cys Ala Met Ser Met Glu Arg Arg Met
      325             330             335
Lys Ile Glu Glu Thr Trp Arg Leu Trp Gln Lys Phe Leu Asp Asp Tyr
      340             345             350
Ser Arg Phe Glu Asp Trp Leu Lys Ser Ala Glu Arg Thr Ala Ala Cys
      355             360             365
Pro Asn Ser Ser Glu Val Leu Tyr Thr Ser Ala Lys Glu Glu Leu Lys

```

370	375	380
Arg Phe Glu Ala Phe Gln Arg Gln Ile His Glu Arg Leu Thr Gln Leu		
385	390	395
Glu Leu Ile Asn Lys Gln Tyr Arg Arg Leu Ala Arg Glu Asn Arg Thr		400
	405	410
Asp Thr Ala Ser Arg Leu Lys Gln Met Val His Glu Gly Asn Gln Arg		415
	420	425
Trp Asp Asn Leu Gln Arg Arg Val Thr Ala Val Leu Arg Arg Leu Arg		430
	435	440
His Phe Thr Asn Gln Arg Glu Glu Phe Glu Gly Thr Arg Glu Ser Ile		445
	450	455
Leu Val Trp Leu Thr Glu Met Asp Leu Gln Leu Thr Asn Val Glu His		460
465	470	475
Phe Ser Glu Ser Asp Ala Asp Asp Lys Met Arg Gln Leu Asn Gly Phe		480
	485	490
Gln Gln Glu Ile Thr Leu Asn Thr Asn Lys Ile Asp Gln Leu Ile Val		495
	500	505
Phe Gly Glu Gln Leu Ile Gln Lys Ser Glu Pro Leu Asp Ala Val Leu		510
	515	520
Ile Glu Asp Glu Leu Glu Glu Leu His Arg Tyr Cys Gln Glu Val Phe		525
	530	535
Gly Arg Val Ser Arg Phe His Arg Arg Leu Thr Ser Cys Thr Pro Gly		540
545	550	555
Leu Glu Asp Glu Lys Glu Ala Ser Glu Asn Glu Thr Asp Met Glu Asp		560
	565	570
Pro Arg Glu Ile Gln Thr Asp Ser Trp Arg Lys Arg Gly Glu Ser Glu		575
	580	585
Glu Pro Ser Ser Pro Gln Ser Leu Cys His Leu Val Ala Pro Gly His		590
	595	600
Glu Arg Ser Gly Cys Glu Thr Pro Val Ser Val Asp Ser Ile Pro Leu		605
	610	615
Glu Trp Asp His Thr Gly Asp Val Gly Gly Ser Ser Ser His Glu Glu		620
625	630	635
Asp Glu Glu Gly Pro Tyr Tyr Ser Ala Leu Ser Gly Lys Ser Ile Ser		640
	645	650
Asp Gly His Ser Trp His Val Pro Asp Ser Pro Ser Cys Pro Glu His		655
	660	665
His Tyr Lys Gln Met Glu Gly Asp Arg Asn Val Pro Pro Val Pro Pro		670
	675	680
Ala Ser Ser Thr Pro Tyr Lys Pro Pro Tyr Gly Lys Leu Leu Leu Pro		685
	690	695
Pro Gly Thr Asp Gly Gly Lys Glu Gly Pro Arg Val Leu Asn Gly Asn		700
705	710	715
Pro Gln Gln Glu Asp Gly Gly Leu Ala Gly Ile Thr Glu Gln Gln Ser		720
	725	730
Gly Ala Phe Asp Arg Trp Glu Met Ile Gln Ala Gln Glu Leu His Asn		735
	740	745
Lys Leu Lys Ile Lys Gln Asn Leu Gln Gln Leu Asn Ser Asp Ile Ser		750
	755	760
Ala Ile Thr Thr Trp Leu Lys Lys Thr Glu Ala Glu Leu Glu Met Leu		765
	770	775
Lys Met Ala Lys Pro Pro Ser Asp Ile Gln Glu Ile Glu Leu Arg Val		780
785	790	795
Lys Arg Leu Gln Glu Ile Leu Lys Ala Phe Asp Thr Tyr Lys Ala Leu		800

```
<210> 3791
<211> 1011
<212> DNA
<213> Homo sapiens
```

2940

tccccgaacaa ctcctcccat gattggagga ggggtgggta aaaggtactc tgtggcctgc
 360
 tccatggtgc tgggtgttcaa cagtgcctcc attgcatgtt cccttgtgaa gcccattgtcc
 420
 atgagctgtt gcagttgttg ctgggtgact tgagggtccc ggcgggagcc accttcctct
 480
 tgccctgtat cctcttctcc tcgagacccc tccttctcct tgcttagtct ctctcgaatc
 540
 acaggttctc ctggaggat gtggcataga atggccagca tcgattcagc cattcgtcca
 600
 ccatatacct tcaggggttt ccggttccat aagtttttga tgcaagtaaa ggctgctttc
 660
 tgagttacca caaggaagcg cagtgcactg aactggggaa agttctggac acctccaggc
 720
 aatttggcag gcagcgaatg tggagattca agcacctggg tgggattcac catcttctcc
 780
 accagcataa gccaggcatc taggaattct cctgtgccat caggcaagtc tgagtgttcc
 840
 aatccctcag aacaggaac ttacctccc atggacagag cccagttgaa agtttcaaaa
 900
 agagcattgt ggcctccgga gcagagaaat ttttgacgca tgaggtggtg gggatacttc
 960
 ctctcatcaa acagcattgg ggatgtgaaa ccaactgaac agatgaagaa t
 1011

<210> 3792

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3792

Met	Leu	Phe	Asp	Glu	Arg	Lys	Tyr	Pro	Tyr	His	Leu	Met	Leu	Gln	Lys
1				5				10					15		
Phe	Leu	Cys	Ser	Gly	Gly	His	Asn	Ala	Leu	Phe	Glu	Thr	Phe	Asn	Trp
			20					25					30		
Ala	Leu	Ser	Met	Gly	Gly	Lys	Val	Pro	Val	Ser	Glu	Gly	Leu	Glu	His
			35				40					45			
Ser	Asp	Leu	Pro	Asp	Gly	Thr	Gly	Glu	Phe	Leu	Asp	Ala	Trp	Leu	Met
			50			55				60					
Leu	Val	Glu	Lys	Met	Val	Asn	Pro	Thr	Thr	Val	Leu	Glu	Ser	Pro	His
					70					75				80	
Ser	Leu	Pro	Ala	Lys	Leu	Pro	Gly	Gly	Val	Gln	Asn	Phe	Pro	Gln	Phe
			85					90						95	
Ser	Ala	Leu	Arg	Phe	Leu	Val	Val	Thr	Gln	Lys	Ala	Ala	Phe	Thr	Cys
			100					105					110		
Ile	Lys	Asn	Leu	Trp	Asn	Arg	Lys	Pro	Leu	Lys	Val	Tyr	Gly	Gly	Arg
			115				120					125			
Met	Ala	Glu	Ser	Met	Leu	Ala	Ile	Leu	Cys	His	Ile	Leu	Arg	Gly	Glu
			130			135				140					
Pro	Val	Ile	Arg	Glu	Arg	Leu	Ser	Lys	Glu	Lys	Glu	Gly	Ser	Arg	Gly
					150					155				160	
Glu	Glu	Asp	Thr	Gly	Gln	Glu	Glu	Gly	Gly	Ser	Arg	Arg	Glu	Pro	Gln
					165				170					175	
Val	Asn	Gln	Gln	Gln	Leu	Gln	Gln	Leu	Met	Asp	Met	Gly	Phe	Thr	Arg

<212> DNA

<213> Homo sapiens

<400> 3795

aactgcctgt acaagaaggg ccctgatggc tatgaccccc agttcataac caagctgctc
60
cgcaactaca ggtctcatcc caccatcctg gacattccta accagctcta ttatgaaggg
120
gagctgcagg cctgtgctga tgtcgtggat cgagaacgct tctgccgctg ggcgggccta
180
cctcgacagg gctttcccat catctttcac ggcgtaatgg gcaaagatga gcgtgaaggc
240
aacagcccat ccttcttcaa cctgaagag gctgccacag tgacttccta cctgaagctg
300
ctcctggccc cctctccaa gaagggcaaa gcccgcctga gccctcgaag tgtgggcgtc
360
atctccccgt accggaaca ggtggagaaa atccgttact gcatcacaa acttgacagg
420
gagcttcgag gactggatga catcaaggac ttgaaggtgg gttcagtaga agaattccaa
480
ggccaagaac gaagcgtcat cctcatctcc accgtgcgaa gcagccagag ctttgtgcag
540
ctggatctgg actttaatct gggtttcctt aagaacccca agaggttcaa ttagctgtg
600
acccgggcca aggcctgct catcatcgtg gggaaccccc ttctcctggg ccatgaccct
660
gactggaaag tattcctgga gttctgtaa gaaaacggag ggtataccgg gtgtcccttc
720
cctgccaaac tggacctgca acagggacag aatttactgc aaggtctgag caagctcagc
780
ccctctacct cagggcccca cagccatgac tacctcccc aggagcggga gggatgaagg
840
ggcctgtctc tgcaagtgga gccagagtgg aggaatgagc tctgaagaca cagcaccag
900
ccttctcgca ccagccaagc cttaactgcc tgctgaccc tgaaccagaa ccagctgaa
960
ctgcccctcc aaggacagg aaggctgggg gagggagttt acaaccaag ccattccacc
1020
ccctccccctg ctggggagaa tgacacatca agctgctaac aattggggga aggggaagga
1080
agaaaactct gaaaacaaaa tcttgttcta tgcaaaagcc ttgataatgt ctctctgcc
1140
tggcccagc ttctgagcc cctaagctga ccctgtaggg aagggtggga ctttcagccc
1200
tgctgagggt cccatccct tccagtggga gaggaacca gccccacac tcgggggagg
1260
aaacccagtg ggaggtggca gggaagccac ccacaggttt ctaagtttag cccctgcta
1320
cagaccactc ccttcacgcg t
1341

<210> 3796

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3796

```

Asn Cys Leu Tyr Lys Lys Gly Pro Asp Gly Tyr Asp Pro Gln Phe Ile
 1           5           10           15
Thr Lys Leu Leu Arg Asn Tyr Arg Ser His Pro Thr Ile Leu Asp Ile
      20           25           30
Pro Asn Gln Leu Tyr Tyr Glu Gly Glu Leu Gln Ala Cys Ala Asp Val
      35           40           45
Val Asp Arg Glu Arg Phe Cys Arg Trp Ala Gly Leu Pro Arg Gln Gly
      50           55           60
Phe Pro Ile Ile Phe His Gly Val Met Gly Lys Asp Glu Arg Glu Gly
      65           70           75           80
Asn Ser Pro Ser Phe Phe Asn Pro Glu Glu Ala Ala Thr Val Thr Ser
      85           90           95
Tyr Leu Lys Leu Leu Leu Ala Pro Ser Ser Lys Lys Gly Lys Ala Arg
      100          105          110
Leu Ser Pro Arg Ser Val Gly Val Ile Ser Pro Tyr Arg Lys Gln Val
      115          120          125
Glu Lys Ile Arg Tyr Cys Ile Thr Lys Leu Asp Arg Glu Leu Arg Gly
      130          135          140
Leu Asp Asp Ile Lys Asp Leu Lys Val Gly Ser Val Glu Glu Phe Gln
      145          150          155          160
Gly Gln Glu Arg Ser Val Ile Leu Ile Ser Thr Val Arg Ser Ser Gln
      165          170          175
Ser Phe Val Gln Leu Asp Leu Asp Phe Asn Leu Gly Phe Leu Lys Asn
      180          185          190
Pro Lys Arg Phe Asn Val Ala Val Thr Arg Ala Lys Ala Leu Leu Ile
      195          200          205
Ile Val Gly Asn Pro Leu Leu Leu Gly His Asp Pro Asp Trp Lys Val
      210          215          220
Phe Leu Glu Phe Cys Lys Glu Asn Gly Gly Tyr Thr Gly Cys Pro Phe
      225          230          235          240
Pro Ala Lys Leu Asp Leu Gln Gln Gly Gln Asn Leu Leu Gln Gly Leu
      245          250          255
Ser Lys Leu Ser Pro Ser Thr Ser Gly Pro His Ser His Asp Tyr Leu
      260          265          270
Pro Gln Glu Arg Glu Gly Glu Gly Gly Leu Ser Leu Gln Val Glu Pro
      275          280          285
Glu Trp Arg Asn Glu Leu
      290

```

<210> 3797

<211> 1970

<212> DNA

<213> Homo sapiens

<400> 3797

```

nnggaaccgc ccgctgccag cccggccagg caccctcgca gcatggcctg gaacaccaac
 60
ctccgctggc ggctgccgct cacctgcctg ctccctgcagg tgattatggt gattctcttc
 120
ggggtgttcg tgcgctacga cttcgaggcc gacgccact ggtggtcaga gaggacgcac
 180

```

aagaacttga gcgacatgga gaacgaattc tactatcgct acccaagctt ccaggacgtg
240
cacgtgatgg tcttcgtggg cttcggttc ctcagtactt tctgcagcg ctacggcttc
300
agcgccgtgg gcttcaactt cctgttgga gccttcggca tccagtgggc gctgctcatg
360
cagggctggt tccacttctt acaagaccgc tacatcgctg tgggcgtgga gaacctcatc
420
aacgtgact tctgcgtggc ctctgtctgc gtggcctttg gggcagttct gggtaaagtc
480
agccccattc agctgctcat catgaacttc ttccaagtga ccctcttcgc tgtgaatgag
540
ttcattctcc ttaacctgct aaagtggaag gatgcaggag gctccatgac catccacaca
600
tttggcgect actttgggct cacagtgacc cggatcctct accgacgcaa cctagagcag
660
agcaaggaga gacagaattc tgtgtaccag tcggacctct ttgccatgat tggcaccctc
720
ttcctgtgga tgtactggcc cagcttcaac tcagccatat cctaccatgg ggacagccag
780
caccgagccg ccatcaacac ctactgctcc ttggcagcct gcgtgcttac ctcggtggca
840
atatccagt ccctgcacaa gaagggaag ctggacatgg tgcacatcca gaatgccag
900
ctcgaggag gggtgggcgt ggggtaccgt gctgagatga tgctcatgcc ttacgggtgcc
960
ctcatcctg gcttcgtctg cggcatcatc tccacctgg gttttgtata cctgacccca
1020
ttcctggagt cccggtgca catccaggac acatgtggca ttaacaatct gcatggcatt
1080
cctggcatca taggcggcat cgtgggtgct gtgacagcgg cctccgccag ccttgaagtc
1140
tatggaaaag aagggtctgt ccattccttt gactttcaag gtttcaacgg ggactggacc
1200
gcaagaacac agggaaagtt ccagatttat ggtctcttgg tgacctggc catggccctg
1260
atgggtggca tcattgtggg gctcattttg agattacat tctggggaca accttcagat
1320
gagaactgct ttgaggatgc ggtctactgg gagatgcctg aagggaacag cactgtctac
1380
atccctgagg accccacctt caagccctca ggacctcag taccctcagt acccatggtg
1440
tcccactac ccatggcttc ctcggtaccc ttggtaccct aggetcccag ggcaggtag
1500
gagcaggctc cacagactgt cctggggccc agaggagctg gtgctgacct agctagggat
1560
gcaagagtga gcaagcagca cccccacctg ctggcttggc ctcaagggtc ctccaccct
1620
gccctcccct tcatcccagg gggctctgct gagaatggag aaggagaagc taaaaagtgg
1680
gcatccaagc cgggttctgg ctgcagaagt tctgectctg cctggggctt tggccacatt
1740
ggagaaaaac aggtctcaaag tggggtggg acctggtggg tgaacctgag ctctcccagg
1800

agacaactta gctgccagtc accacctatg aggtcttctt accccgtgcc tgcacctcgg
 1860
 ccagcatctc ctatgctccc tgggtccccc agacctctct gtgttggtg cgtggcagcc
 1920
 tccaggaata aacattcttg ttgtcctttg taaaaaaaa aaaaaaaaaa
 1970

<210> 3798

<211> 473

<212> PRT

<213> Homo sapiens

<400> 3798

Leu	Arg	Trp	Arg	Leu	Pro	Leu	Thr	Cys	Leu	Leu	Gln	Val	Ile	Met	
1				5				10					15		
Val	Ile	Leu	Phe	Gly	Val	Phe	Val	Arg	Tyr	Asp	Phe	Glu	Ala	Asp	Ala
			20					25					30		
His	Trp	Trp	Ser	Glu	Arg	Thr	His	Lys	Asn	Leu	Ser	Asp	Met	Glu	Asn
			35					40					45		
Glu	Phe	Tyr	Tyr	Arg	Tyr	Pro	Ser	Phe	Gln	Asp	Val	His	Val	Met	Val
			50					55				60			
Phe	Val	Gly	Phe	Gly	Phe	Leu	Met	Thr	Phe	Leu	Gln	Arg	Tyr	Gly	Phe
65					70					75					80
Ser	Ala	Val	Gly	Phe	Asn	Phe	Leu	Leu	Ala	Ala	Phe	Gly	Ile	Gln	Trp
					85					90					95
Ala	Leu	Leu	Met	Gln	Gly	Trp	Phe	His	Phe	Leu	Gln	Asp	Arg	Tyr	Ile
			100					105					110		
Val	Val	Gly	Val	Glu	Asn	Leu	Ile	Asn	Ala	Asp	Phe	Cys	Val	Ala	Ser
			115					120					125		
Val	Cys	Val	Ala	Phe	Gly	Ala	Val	Leu	Gly	Lys	Val	Ser	Pro	Ile	Gln
			130					135					140		
Leu	Leu	Ile	Met	Thr	Phe	Gln	Val	Thr	Leu	Phe	Ala	Val	Asn	Glu	
145					150					155				160	
Phe	Ile	Leu	Leu	Asn	Leu	Leu	Lys	Val	Lys	Asp	Ala	Gly	Gly	Ser	Met
					165					170				175	
Thr	Ile	His	Thr	Phe	Gly	Ala	Tyr	Phe	Gly	Leu	Thr	Val	Thr	Arg	Ile
			180					185						190	
Leu	Tyr	Arg	Arg	Asn	Leu	Glu	Gln	Ser	Lys	Glu	Arg	Gln	Asn	Ser	Val
			195					200					205		
Tyr	Gln	Ser	Asp	Leu	Phe	Ala	Met	Ile	Gly	Thr	Leu	Phe	Leu	Trp	Met
			210					215					220		
Tyr	Trp	Pro	Ser	Phe	Asn	Ser	Ala	Ile	Ser	Tyr	His	Gly	Asp	Ser	Gln
225					230					235					240
His	Arg	Ala	Ala	Ile	Asn	Thr	Tyr	Cys	Ser	Leu	Ala	Ala	Cys	Val	Leu
					245					250				255	
Thr	Ser	Val	Ala	Ile	Ser	Ser	Ala	Leu	His	Lys	Lys	Gly	Lys	Leu	Asp
			260					265						270	
Met	Val	His	Ile	Gln	Asn	Ala	Thr	Leu	Ala	Gly	Gly	Val	Ala	Val	Gly
			275					280					285		
Thr	Ala	Ala	Glu	Met	Met	Leu	Met	Pro	Tyr	Gly	Ala	Leu	Ile	Ile	Gly
			290					295					300		
Phe	Val	Cys	Gly	Ile	Ile	Ser	Thr	Leu	Gly	Phe	Val	Tyr	Leu	Thr	Pro
305					310					315					320
Phe	Leu	Glu	Ser	Arg	Leu	His	Ile	Gln	Asp	Thr	Cys	Gly	Ile	Asn	Asn

```

          325          330          335
Leu His Gly Ile Pro Gly Ile Ile Gly Gly Ile Val Gly Ala Val Thr
          340          345          350
Ala Ala Ser Ala Ser Leu Glu Val Tyr Gly Lys Glu Gly Leu Val His
          355          360          365
Ser Phe Asp Phe Gln Gly Phe Asn Gly Asp Trp Thr Ala Arg Thr Gln
          370          375          380
Gly Lys Phe Gln Ile Tyr Gly Leu Leu Val Thr Leu Ala Met Ala Leu
385          390          395          400
Met Gly Gly Ile Ile Val Gly Leu Ile Leu Arg Leu Pro Phe Trp Gly
          405          410          415
Gln Pro Ser Asp Glu Asn Cys Phe Glu Asp Ala Val Tyr Trp Glu Met
          420          425          430
Pro Glu Gly Asn Ser Thr Val Tyr Ile Pro Glu Asp Pro Thr Phe Lys
          435          440          445
Pro Ser Gly Pro Ser Val Pro Ser Val Pro Met Val Ser Pro Leu Pro
          450          455          460
Met Ala Ser Ser Val Pro Leu Val Pro
465          470

```

<210> 3799

<211> 210

<212> DNA

<213> Homo sapiens

<400> 3799

```

tcgaggaact gctcggcctc cacatcccaa gctcacctt ctccttgcac cacagagaga
60
agcaagcaga aggcccgag gagacaaga tccagctcct ctcctcttc ttccagttct
120
tctagctcct cttcttcttc ctcgtctctc tcctcttctt ccagtgatgg ccggaagaag
180
cgggggaagt acaaggacaa gaggaggaag
210

```

<210> 3800

<211> 70

<212> PRT

<213> Homo sapiens

<400> 3800

```

Ser Arg Asn Cys Ser Ala Ser Thr Ser Gln Ala Ser Pro Ser Pro Cys
1          5          10          15
Ile Thr Glu Arg Ser Lys Gln Lys Ala Arg Arg Arg Thr Arg Ser Ser
20          25          30
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
35          40          45
Ser Ser Ser Ser Ser Ser Ser Asp Gly Arg Lys Lys Arg Gly Lys Tyr
50          55          60
Lys Asp Lys Arg Arg Lys
65          70

```

<210> 3801

<211> 4070

<212> DNA

<213> Homo sapiens

<400> 3801

```

ngctagcccc ggggcaagca ctgacgtgtc tctcggcgga gctgctgtgc agtggaaacgc
60
gctggggccgc gggcagcgtc gcctcacgcg gagcagagct gagctgaagc gggaccccgga
120
gcccagagcag ccgccgccat ggcaatcaaa tttctggaag tcatcaagcc cttctgtgtc
180
atcctgccgg aaattcagaa gccagagagg aagattcagt ttaaggagaa agtgctgtgg
240
accgctatca ccctctttat cttcttagtg tgctgccaga ttccctgtt tgggatcatg
300
tcttcagatt cagctgaccc tttctattgg atgagagtga ttctagcctc taacagaggc
360
acattgatgg agctagggat ctctcctatt gtcacgtctg gccttataat gcaactcttg
420
gctggcgcca agataattga agttgggtgac acccaaaaag accgagctct cttcaacgga
480
gcccaaaagt tatttgccat gatcattact atcgccagct ctatcgtgta tgtgatgacc
540
gggatgtatg gggacccttc tgaaatgggt gctggaattt gcctgctaata catcattcag
600
ctctttgttg ctggtttgat tgctcactt ttggatgagc tgctacagaa gggttacggc
660
ttgggggtctg ggatttccct ctttattgcc accaactct gtgagacat tgtctggaag
720
gccttagtc ccactaccat taacactggc agaggtactg agtttgaggg tgcagtcata
780
gctctgttcc atttgttggc caccaggacg gacaaagtcc gagctttacg ggaggctttt
840
tatcggcaga acttacccaa cctcatgaat ctcatcgcca ccacttttgt ctttgcagtg
900
gtcatctatt tccagggtct ccgagtggac ctgccaatca agtcggcccc ctaccgtggc
960
cagtacaaca cctatcccat caagctcttc tatacgtcca acatcccat catcctgcag
1020
tcggcccttg tgtccaacct ttatgttatt tcccaaatgc tctcagctcg atttagtggc
1080
aacttttttag taaatttact aggacagtgg tcggacacgt cttctggggg ccagcacgt
1140
gcttatccag ttggtggcct ttgctattac ctgtccctc cagaatcttt tggctccgtg
1200
ttagaagacc cgggtccatg agttgtatac atagtgttca tgctgggctc ctgtgcattc
1260
ttctccaaaa cgtggattga ggtctcaggt tcctctgcca aagatgttgc aaagcagctg
1320
aaggagcagc agatggtgat gagaggccac cgagagacct ccattggtcca tgaactcaac
1380
cgggtacatc ccacagccg gccctttggt gggctgtgca tgggggccct ctcggtcctg
1440
gctgacttcc taggcgccat tgggtctgga accgggatcc tgctcgcagt cacaatcatc
1500

```

taccagtact ttgagatctt cgttaaggag caaagcgagg ttggcagcat gggggccctg
1560
ctcttctgag cccgtctccc ggacagggtg aggaagctgc tccagaagcg cctcgggaagg
1620
ggagctctca tcatggcgcg tgcgtctgcg gcatatggac ttttaataat gtttttgaat
1680
ttcgtattct ttcattccac tgtgtaaagt gctagacatt ttccaattta aaattttgct
1740
ttttatcctg gcaactggcaa aaagaactgt gaaagtgaat ttttattcag ccgactgcca
1800
gagaagtggg aatgggtatag gattgtcccc aagtgtccat gtaacttttg ttttaacctt
1860
tgcaccttct cagtgcgtga tgcggctgca gccgtctcac ctgtttcccc acaaagggaa
1920
tttctcactc tgggtggaag cacaacact gaaatgtcta cgtttcattt tggcagtagg
1980
gtgtgaagct gggagcagat catgtatttc ccggagacat gggaccttgc tggcatgtct
2040
ccttcacaat caggcggtgg aatatctggc ttaggactgt ttctctctaa gacaccattg
2100
ttttccctta ttttaaaagt gattttttta aggacagaac ttcttccaaa agagagggat
2160
ggctttccca gaagacactc ctggccatct gtggatttgt ctgtgcacct attggctctt
2220
ctagctgact cttctgggtg ggcttagagt ctgcctgttt ctgctagctc cgtgtttagt
2280
ccacttgggt catcagctct gccaaagtga gcctggccaa gctaggtgga cagacccttg
2340
cagtgatgtc cgtttgtcca gattctgcca gtcactctg gacacgtctc ctgcagctg
2400
ccctagcaag gggagacatt gtggtagcta tcagacatgg acagaaactg acttagtgct
2460
cacaagcccc tacaccttct gggctgaaga tcaccagct gtgttcagaa ttttcttact
2520
gtgcttagga ctgcacgcaa gtgagcagac accaccgact tcctttctgc gtcaccagt
2580
tcgtcagcag agagaggaca gcacaggctc aaggttggtg gtgaagtcag gttcggggtg
2640
catgggctgt ggtggtgttg atcagttgct ccagtgtttg aaataagaag actcatgttt
2700
atgtctggaa taagttctgt ttgtgctgac aggtggccta ggtcctggag atgagcacc
2760
tctctctggc ctttagggag tcccctctta ggacaggcac tgcccagcag caagggcagc
2820
agagttgggt gctaagatcc tgaggagctc gaggtttcga gctggcttta gacattggtg
2880
ggaccaagga tgttttgag gatgccctga tcctaagaag ggggctggg ggtgcgtgca
2940
gcctgtcggg gagacccac tctgacagtg ggcacacggc agcctgcaaa gcacagggcc
3000
accgccacag cccggcagag gggcacactc tggagacctt gctggcagtg ctageccagga
3060
aacagagtga ccaagggaca agaagggaact tgcctaaagc caccagcaa ctacagcagca
3120

gaaccaagat gggccccagg ctctccata tggcccaggg cttaccaccc tatcacacgt
 3180
 ggccttgtct agaccacgtc ctgagcaggg gagaggctct tgagacctga tgcctccta
 3240
 cccacatggt tctcccactg cctgtctgc tctgtgcta cagaggggca gggcctcccc
 3300
 cagcccacgc ttaggaatgc ttggcctctg gcaggcaggc agctgtaccc aagctggtgg
 3360
 gcagggggct ggaaggcacc aggcctcagg aggagcccca tagtcccgcc tgcagcctgt
 3420
 aaccatcggc tggggcctgc aaggcccaca ctacgcctt gtgggtgatg gtcacggtgg
 3480
 gtgggtgggg gctgacccca gcttccaggg gactgtcact gtggacgcca aaatggcata
 3540
 actgagataa ggtgaataag tgacaaataa agccagtttt ttacaaggta cttgatcatg
 3600
 ttctcttaat cttaaattag attttattcc caaaaaggcc agtgaggcgc aaagcttggt
 3660
 tgcagcttta tgtgtgtcaa aggccttggtt ggcgcactca ggcattttgc ctggaaaagt
 3720
 tcccttctga tggatcatgc aacctggtgc tcacatttgt gataaagtga tatgggtgct
 3780
 gggccacatg tggagctgct gcagggctct gcccgtaggg cagagtgcac tggctgtccc
 3840
 gtgagaatgc agaggcctcc gctgagccag ggcgcctgcc acccgtgga agagtgggaa
 3900
 ccttctagca ggagcctagg gcccataac tcgaagccct ttgagcctca gctccagtac
 3960
 ccagctggtg attggagaag tcttaacttg gttgtgaggc tggcctcaga cccgacctgt
 4020
 agccaagcca gaaggaccca gtgttgtgtg ggtgggagtg gcaggcttgt
 4070

<210> 3802

<211> 476

<212> PRT

<213> Homo sapiens

<400> 3802

Met	Ala	Ile	Lys	Phe	Leu	Glu	Val	Ile	Lys	Pro	Phe	Cys	Val	Ile	Leu
1			5						10					15	
Pro	Glu	Ile	Gln	Lys	Pro	Glu	Arg	Lys	Ile	Gln	Phe	Lys	Glu	Lys	Val
			20					25					30		
Leu	Trp	Thr	Ala	Ile	Thr	Leu	Phe	Ile	Phe	Leu	Val	Cys	Cys	Gln	Ile
			35				40					45			
Pro	Leu	Phe	Gly	Ile	Met	Ser	Ser	Asp	Ser	Ala	Asp	Pro	Phe	Tyr	Trp
	50				55					60					
Met	Arg	Val	Ile	Leu	Ala	Ser	Asn	Arg	Gly	Thr	Leu	Met	Glu	Leu	Gly
65				70					75					80	
Ile	Ser	Pro	Ile	Val	Thr	Ser	Gly	Leu	Ile	Met	Gln	Leu	Leu	Ala	Gly
			85				90					95			
Ala	Lys	Ile	Ile	Glu	Val	Gly	Asp	Thr	Pro	Lys	Asp	Arg	Ala	Leu	Phe
			100				105					110			
Asn	Gly	Ala	Gln	Lys	Leu	Phe	Gly	Met	Ile	Ile	Thr	Ile	Gly	Gln	Ser

```

      115              120              125
Ile Val Tyr Val Met Thr Gly Met Tyr Gly Asp Pro Ser Glu Met Gly
      130              135              140
Ala Gly Ile Cys Leu Leu Ile Ile Ile Gln Leu Phe Val Ala Gly Leu
145              150              155              160
Ile Val Leu Leu Leu Asp Glu Leu Leu Gln Lys Gly Tyr Gly Leu Gly
      165              170              175
Ser Gly Ile Ser Leu Phe Ile Ala Thr Asn Ile Cys Glu Thr Ile Val
      180              185              190
Trp Lys Ala Phe Ser Pro Thr Thr Ile Asn Thr Gly Arg Gly Thr Glu
      195              200              205
Phe Glu Gly Ala Val Ile Ala Leu Phe His Leu Leu Ala Thr Arg Thr
210              215              220
Asp Lys Val Arg Ala Leu Arg Glu Ala Phe Tyr Arg Gln Asn Leu Pro
225              230              235              240
Asn Leu Met Asn Leu Ile Ala Thr Ile Phe Val Phe Ala Val Val Ile
      245              250              255
Tyr Phe Gln Gly Phe Arg Val Asp Leu Pro Ile Lys Ser Ala Arg Tyr
260              265              270
Arg Gly Gln Tyr Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn
      275              280              285
Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile
290              295              300
Ser Gln Met Leu Ser Ala Arg Phe Ser Gly Asn Phe Leu Val Asn Leu
305              310              315              320
Leu Gly Gln Trp Ser Asp Thr Ser Ser Gly Gly Pro Ala Arg Ala Tyr
      325              330              335
Pro Val Gly Gly Leu Cys Tyr Tyr Leu Ser Pro Pro Glu Ser Phe Gly
      340              345              350
Ser Val Leu Glu Asp Pro Val His Ala Val Val Tyr Ile Val Phe Met
      355              360              365
Leu Gly Ser Cys Ala Phe Phe Ser Lys Thr Trp Ile Glu Val Ser Gly
370              375              380
Ser Ser Ala Lys Asp Val Ala Lys Gln Leu Lys Glu Gln Gln Met Val
385              390              395              400
Met Arg Gly His Arg Glu Thr Ser Met Val His Glu Leu Asn Arg Tyr
      405              410              415
Ile Pro Thr Ala Ala Ala Phe Gly Gly Leu Cys Ile Gly Ala Leu Ser
      420              425              430
Val Leu Ala Asp Phe Leu Gly Ala Ile Gly Ser Gly Thr Gly Ile Leu
      435              440              445
Leu Ala Val Thr Ile Ile Tyr Gln Tyr Phe Glu Ile Phe Val Lys Glu
450              455              460
Gln Ser Glu Val Gly Ser Met Gly Ala Leu Leu Phe
465              470              475

```

<210> 3803

<211> 345

<212> DNA

<213> Homo sapiens

<400> 3803

ccaagaggaa actccttgaa gaggctacag gaagaaacag gtgctaaaat gtctatcctg
60

ggcaaaggat caatgagaga taaagctaag gaagaagaac taaggaagag tggggaagcc
 120
 aaatatgccc acttgagtga tgagcttcat gtattaattg aagtgtttgc tccacctggg
 180
 gaagcttatt cacgtatgag tcatgcattg gaagagatta aaaaattcct ggttcctgac
 240
 tacaatgatg aaattcgta ggaacaacta cgtgaattat cttacttaaa tggctcagag
 300
 gactctgggc gtggcagagg tattagaggc agagggatcc ggatt
 345

<210> 3804

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3804

Pro	Arg	Gly	Asn	Ser	Leu	Lys	Arg	Leu	Gln	Glu	Glu	Thr	Gly	Ala	Lys
1				5				10						15	
Met	Ser	Ile	Leu	Gly	Lys	Gly	Ser	Met	Arg	Asp	Lys	Ala	Lys	Glu	Glu
			20					25					30		
Glu	Leu	Arg	Lys	Ser	Gly	Glu	Ala	Lys	Tyr	Ala	His	Leu	Ser	Asp	Glu
			35				40					45			
Leu	His	Val	Leu	Ile	Glu	Val	Phe	Ala	Pro	Pro	Gly	Glu	Ala	Tyr	Ser
	50				55						60				
Arg	Met	Ser	His	Ala	Leu	Glu	Glu	Ile	Lys	Lys	Phe	Leu	Val	Pro	Asp
65					70					75				80	
Tyr	Asn	Asp	Glu	Ile	Arg	Gln	Glu	Gln	Leu	Arg	Glu	Leu	Ser	Tyr	Leu
				85					90					95	
Asn	Gly	Ser	Glu	Asp	Ser	Gly	Arg	Gly	Arg	Gly	Ile	Arg	Gly	Arg	Gly
			100					105						110	
Ile	Arg	Ile													
			115												

<210> 3805

<211> 1923

<212> DNA

<213> Homo sapiens

<400> 3805

ataaaatttt taaaagggtgg ggggctggaa ctggcagagt ataagtggca ctgtgtgttg
 60
 ctgagctgaa ctccatgccc tgtgaacaat ataagcaaca gtcctgctat ttccactgac
 120
 aagagcccggt tgctaccag atgccaggcc ctgtgcttcc tctgccttt gaggttttgg
 180
 ctgtgatca accaggaggg aaacatggtt actgctcgcc aggaacctcg cctggtcctg
 240
 atttccctga cctgcgatgg tgacaccctg actctcagtg cagcctacac aaaggaccta
 300
 ctactgccta taaaacgcc caccacaaat gcagtgcaca agtgcagagt gcacggcctg
 360
 gagatagagg gcagggactg tggcgaggcc gccgccaggt ggataaccag cttcctgaag
 420

tcacagccct accgcctggc gcacttcgag cctcacatgc gaccgagacg tectcatcaa
480
atagcagact tgttccgacc caaggaccag attgcttact cagacaccag cccattcttg
540
atcctttctg aggcgtcgct ggcggatctc aactccaggc tagagaagaa agttaagca
600
accaacttca ggcccaatat tgtaatttca ggatgcgatg tctatgcaga ggattcttgg
660
gatgagcttc ttattgggtga cgtggaactg aaaaggggtga tggcttggtc cagatgcatt
720
ttaaccacag tggaccacaga caccgggtgc atgagcagga aggaaccgct ggaaacactg
780
aagagttatc gccagtgtga cccttcagaa cgaaagttat atggaaaac accactcttt
840
gggcagtatt ttgtgctgga aaacccaggg accatcaaag tgggagacc tgtgtacctg
900
ctgggccagt aatgggaacc gtatgtcctg gaattattaga tgccttttaa aaatgttctc
960
aaaaatgaca acacttgaag catgggtgtt cagaactgag acctctacat tttctttaa
1020
tttgtgattt tcacattttt cgtcttttgg acttctggtg tctcaatgct tcaatgtccc
1080
agtgcacaaa gtaagaaat atagtctcaa taacttagta ggacttcagt aagtcactta
1140
aatgacaaga caggattctg aaaactcccc gtttaactga ttatggaata gttctttctc
1200
ctgcttctcc gtttatctac caagagcgca gacttgcac ctgtcactac cactcgtag
1260
agaaagagaa gaagagaaag aggaagagt ggtgggctgg aagaatgtcc tagaatgtgt
1320
tattgcccct gttcatgagg tacgcaatga aaattaaatt gcaccccaaa tatggctgga
1380
atgccacttc ccttttcttc tcaagccccg ggctagcttt tgaaatggca taaagactga
1440
ggtgaccttc aggaagcact gcagatatta atttccata gatctggatc tggccctgct
1500
gcttctcaga cagcattgga tttcctaaag gtgctcagga ggatgggtgt gtagtcatgg
1560
aggacccctg gatccttgcc attccccca gctaatacag gagtgcctct tctccagttc
1620
cgggtgaaaa agttctgaat tctgtggagg agaagaaaag tgattcagtg atttcagata
1680
gactactgaa aacctttaa gggggaaaag gaaagcatat gtcagttgtt taaaacccaa
1740
tatctatttt ttaactgatt gtataactct aagatctgat gaagtatatt ttttattgcc
1800
attttgcct ttgattatat tgggaagttg actaaacttg aaaaatgttt ttaaaactgt
1860
gaataaatgg aagctacttt gaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa
1920
aaa
1923

<210> 3806

<211> 280
 <212> PRT
 <213> Homo sapiens

<400> 3806
 Thr Pro Cys Pro Val Asn Asn Ile Ser Asn Ser Pro Ala Ile Ser Thr
 1 5 10 15
 Asp Lys Ser Pro Leu Pro Thr Arg Cys Gln Ala Leu Cys Phe Leu Leu
 20 25 30
 Pro Leu Arg Phe Trp Leu Val Ile Asn Gln Glu Gly Asn Met Val Thr
 35 40 45
 Ala Arg Gln Glu Pro Arg Leu Val Leu Ile Ser Leu Thr Cys Asp Gly
 50 55 60
 Asp Thr Leu Thr Leu Ser Ala Ala Tyr Thr Lys Asp Leu Leu Leu Pro
 65 70 75 80
 Ile Lys Thr Pro Thr Thr Asn Ala Val His Lys Cys Arg Val His Gly
 85 90 95
 Leu Glu Ile Glu Gly Arg Asp Cys Gly Glu Ala Ala Ala Gln Trp Ile
 100 105 110
 Thr Ser Phe Leu Lys Ser Gln Pro Tyr Arg Leu Val His Phe Glu Pro
 115 120 125
 His Met Arg Pro Arg Arg Pro His Gln Ile Ala Asp Leu Phe Arg Pro
 130 135 140
 Lys Asp Gln Ile Ala Tyr Ser Asp Thr Ser Pro Phe Leu Ile Leu Ser
 145 150 155 160
 Glu Ala Ser Leu Ala Asp Leu Asn Ser Arg Leu Glu Lys Lys Val Lys
 165 170 175
 Ala Thr Asn Phe Arg Pro Asn Ile Val Ile Ser Gly Cys Asp Val Tyr
 180 185 190
 Ala Glu Asp Ser Trp Asp Glu Leu Leu Ile Gly Asp Val Glu Leu Lys
 195 200 205
 Arg Val Met Ala Cys Ser Arg Cys Ile Leu Thr Thr Val Asp Pro Asp
 210 215 220
 Thr Gly Val Met Ser Arg Lys Glu Pro Leu Glu Thr Leu Lys Ser Tyr
 225 230 235 240
 Arg Gln Cys Asp Pro Ser Glu Arg Lys Leu Tyr Gly Lys Ser Pro Leu
 245 250 255
 Phe Gly Gln Tyr Phe Val Leu Glu Asn Pro Gly Thr Ile Lys Val Gly
 260 265 270
 Asp Pro Val Tyr Leu Leu Gly Gln
 275 280

<210> 3807
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 3807
 nacgcgtggc ggctgagcga ggtgaacgag gacttcagct tgtgccccag atacccccgt
 60
 gcggtgatcg tgccatactt ggtggacgat gatgccttgg cgcgcagcgc ccgcttccgt
 120
 cagggaggtc gcttcccggg gctcagctac caccgggtc ccagcggcag agggagcgcg
 180

ccctccccac gctccgcccc tgggtggctg cgtcctttct gggccttttc tttttggccc
 240
 ggtcaattcg cggcgtagcc gctgccccaa ctctgcccc attctggctc cgcacctctc
 300
 ccgccttttc gctgggaagg gtatcacctt tctctggccc cgcacctgac ggttcggggc
 360
 cccgcgaagc tt
 372

<210> 3808
 <211> 85
 <212> PRT
 <213> Homo sapiens

<400> 3808
 Xaa Ala Trp Arg Leu Ser Glu Val Asn Glu Asp Phe Ser Leu Cys Pro
 1 5 10 15
 Arg Tyr Pro Arg Ala Val Ile Val Pro Tyr Leu Val Asp Asp Asp Ala
 20 25 30
 Leu Ala Arg Ser Ala Arg Phe Arg Gln Gly Gly Arg Phe Pro Val Leu
 35 40 45
 Ser Tyr His Pro Ala Pro Ser Gly Arg Gly Ser Ala Pro Ser Pro Arg
 50 55 60
 Ser Ala Pro Gly Trp Leu Arg Pro Phe Trp Ala Phe Ser Phe Trp Pro
 65 70 75 80
 Gly Gln Phe Ala Ala
 85

<210> 3809
 <211> 1221
 <212> DNA
 <213> Homo sapiens

<400> 3809
 aaaacttttt tttttttttt tgttggttaca gattgtatat ttgcatgcct ggggggttacc
 60
 aggctgtacg catataaaca gggaggaggg aggctctgag aacctgccag ggtgcctggg
 120
 ataagctgtg acttttttggc cctgatgcc aagttggag ggtcctctgc taaaaacata
 180
 tggtaacacac ttctccttct tttcatctgg tatcatgtat catctctcag atccaataag
 240
 aaaacattcc cagtccttc cctccctccc tagtaccaag gtcctcatct cagttttcat
 300
 gggtcctatg agggctgcct ctagtgtatga gctggaatct taaggcctga aatagagcca
 360
 gactgcagca gtcccaagtc ctggagagct tcaagtaact gctccgcgc agagccaata
 420
 aagggaattct ccaggaaggt aggcaggcct cctacacat cccgcagggt atacaggggc
 480
 actgcacca gggccagcac ctccagcccg tggccttgg cgcgtgttgc gccggcctcc
 540
 acagccaaca gtcctctgag ctccagagct tggcatagaa gtgccacaac gcgtggcct
 600

gacccgacgt gggagctgcg gtagtcagtg cgctccacgc ggaaagcggc agccgcttcg
 660
 ccagctcct cgcgcagctc gcggttcagc ccgtcctcta ggcttctgtc ctgcgtgtcc
 720
 acgaatccgc cggggaagcc caggcgtcca tcgaagcgca tctgcatcag tatggcgtag
 780
 cgcagcggga tgcggccgaa gagcatccca gggccggcg cgtagaggag agcgtaggta
 840
 ctctgttttg ctaattctgt cttactctt cagctcagca agactactgg gctctctttg
 900
 ggtttccctt ctctgtgcta tgcctccaga caataagcta gggcacttca tttgtttcgt
 960
 ttctctcatg gttcactatc cagtgtgtcc tgttgccaa tgcctgaaaa ccactgtttg
 1020
 gtacattttg tctggttttc tagttaaggc aggaggataa atctgtgtcc tgtttttcca
 1080
 tcatggccag aagcaaaatc tgtatcatgt tctagtaatt ttcacaaacta tcaaagttag
 1140
 tcttactaat cttttctcaa tacctaaagt tcaaaatctc tttgtcaat ctgttatcaa
 1200
 gtactgttat ttttcttaa g
 1221

<210> 3810

<211> 97

<212> PRT

<213> Homo sapiens

<400> 3810

Ala	Gly	Ile	Leu	Arg	Pro	Glu	Ile	Glu	Pro	Asp	Cys	Ser	Ser	Pro	Lys
1			5					10						15	
Ser	Trp	Arg	Ala	Ser	Ser	Asn	Cys	Ser	Arg	Ala	Glu	Pro	Ile	Lys	Glu
			20					25					30		
Phe	Ser	Arg	Lys	Val	Gly	Arg	Pro	Pro	Thr	Pro	Ser	Arg	Arg	Val	Tyr
			35				40					45			
Arg	Gly	Thr	Arg	Thr	Arg	Pro	Ser	Thr	Ser	Ser	Pro	Trp	Ser	Leu	Ala
			50			55					60				
Arg	Val	Ala	Pro	Ala	Ser	Thr	Ala	Asn	Ser	Ser	Ser	Ser	Ser	Asp	Ala
						70				75				80	
Trp	His	Arg	Ser	Ala	Thr	Thr	Arg	Gly	Pro	Asp	Pro	Thr	Trp	Glu	Leu
				85					90					95	

Arg

<210> 3811

<211> 296

<212> DNA

<213> Homo sapiens

<400> 3811

ggtaccctgg agatgggagc cagggtcgg tcaactgattg tgccccccac tgcccaggtt
 60
 cctgtcctta aggtcagaa ctgtagacct tcaggcagac ccgttctccc ctaccagagg
 120

acaccacgcc agatatctgg gcagcaggga catctgacct ggggtgcttg ctggcagcac
 180
 tgcctggaca gcagggectc cttagggcca cctcccaacc cagctaggga gcgtcttaag
 240
 gcctgccctc cctgctgggc ttgggtggga cgctcaggga caggccccctc acgcgt
 296

<210> 3812
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3812
 Met Gly Ala Arg Ala Arg Ser Leu Ile Val Pro Pro Thr Ala Gln Val
 1 5 10 15
 Pro Val Leu Lys Ala Gln Asn Cys Arg Pro Ser Gly Arg Pro Val Leu
 20 25 30
 Pro Tyr Gln Arg Thr Pro Arg Gln Ile Ser Gly Gln Gln Gly His Leu
 35 40 45
 Thr Trp Gly Ala Cys Trp Gln His Cys Leu Asp Ser Arg Ala Ser Leu
 50 55 60
 Gly Pro Pro Pro Asn Pro Ala Arg Glu Arg Leu Lys Ala Cys Pro Pro
 65 70 75 80
 Cys Trp Ala Trp Val Gly Arg Ser Gly Thr Gly Pro Ser Arg
 85 90

<210> 3813
 <211> 1419
 <212> DNA
 <213> Homo sapiens

<400> 3813
 agatctaagt ggtgggcccc ctctgagatg gtgactgtga gccccgagca aaacgaccgc
 60
 acccccttgg tgatggtgca tgggttttggg ggcggcgtgg gtctctggat cctcaacatg
 120
 gactcactga gtgcccgccg cacactgcac accttcgatc tgcttggett cgggcgaagc
 180
 tcaaggccag cattcccaag ggaccgggag ggggctgagg atgagtttgt gacatcgata
 240
 gagacatggc gggagaccat ggggatcccc agcatgatcc tcctggggca cagtttggga
 300
 ggattccttg ccacttctta ctcaatcaag taccctgata gagttaaaca cctcatcctg
 360
 gtggacccat ggggctttcc cctccgacca actaacccea gtgagatccg tgcaccccca
 420
 gcctgggtca aagccgtggc atctgtecta ggacgttcca atccattggc tgttcttga
 480
 gtatctgggc cctgggggcc tggctctggtg cagcgattcc ggccggactt caaacgcaag
 540
 tttgcagact tctttgaaga tgataccata tcagagtata ttaccactg caacgcacag
 600
 aatcccagtg gtgagacagc attcaaagcc atgatggagt cctttggctg ggccccggcg
 660

cctatgctgg agcgaattca cttgattcga aaagatgtgc ctatcactat gatctacggg
 720
 tccgacacct ggatagatac cagtacggga aaaaaggtga agatgcagcg gccggattcc
 780
 tatgtccgag acatggagat taagggtgcc tcccaccatg tctatgctga ccagccacac
 840
 atcttcaatg ctgtggtgga ggagatctgc gactcagttg attgagctgc tctctgaaga
 900
 ggaagaggag aaagccagag agtcactctt acctcctgt ctgcttactc acccactctg
 960
 tcctttcttc accaactaac atgtgccagc caggcagagt cttgtactgt tcccagaaca
 1020
 ggacgacagt gaaaagaaca ctcttgaccc tacactgaag gctgaaggca gaagccacaa
 1080
 gaggccttga gtgccacccc cagggagaaga cataaagggt tgcacaatgc caccatcca
 1140
 ctcttgcca agtggtaccc agatggtgga ggatgtgaag ggattgcacc aagccacatt
 1200
 cactctctct gtggccttct ttcctctggg caaagaaggg cttccagtgg cctttcctca
 1260
 ctctgtagt tttgtgggga taggttccat gcaagaacac cttcctctc catccccac
 1320
 ttcaccccat cccataccag ttccatccag ggtctgctta actgccaaga gcaggtcctg
 1380
 gagttccctt cacctgcaga gtccttttca tgacctagg
 1419

<210> 3814

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3814

Arg Ser Lys Trp Trp Ala Pro Ser Glu Met Val Thr Val Ser Pro Glu
 1 5 10 15
 Gln Asn Asp Arg Thr Pro Leu Val Met Val His Gly Phe Gly Gly Gly
 20 25 30
 Val Gly Leu Trp Ile Leu Asn Met Asp Ser Leu Ser Ala Arg Arg Thr
 35 40 45
 Leu His Thr Phe Asp Leu Leu Gly Phe Gly Arg Ser Ser Arg Pro Ala
 50 55 60
 Phe Pro Arg Asp Pro Glu Gly Ala Glu Asp Glu Phe Val Thr Ser Ile
 65 70 75 80
 Glu Thr Trp Arg Glu Thr Met Gly Ile Pro Ser Met Ile Leu Leu Gly
 85 90 95
 His Ser Leu Gly Gly Phe Leu Ala Thr Ser Tyr Ser Ile Lys Tyr Pro
 100 105 110
 Asp Arg Val Lys His Leu Ile Leu Val Asp Pro Trp Gly Phe Pro Leu
 115 120 125
 Arg Pro Thr Asn Pro Ser Glu Ile Arg Ala Pro Pro Ala Trp Val Lys
 130 135 140
 Ala Val Ala Ser Val Leu Gly Arg Ser Asn Pro Leu Ala Val Leu Arg
 145 150 155 160
 Val Ala Gly Pro Trp Gly Pro Gly Leu Val Gln Arg Phe Arg Pro Asp

```

                165                170                175
Phe Lys Arg Lys Phe Ala Asp Phe Phe Glu Asp Asp Thr Ile Ser Glu
                180                185                190
Tyr Ile Tyr His Cys Asn Ala Gln Asn Pro Ser Gly Glu Thr Ala Phe
                195                200                205
Lys Ala Met Met Glu Ser Phe Gly Trp Ala Arg Arg Pro Met Leu Glu
                210                215                220
Arg Ile His Leu Ile Arg Lys Asp Val Pro Ile Thr Met Ile Tyr Gly
225                230                235                240
Ser Asp Thr Trp Ile Asp Thr Ser Thr Gly Lys Lys Val Lys Met Gln
                245                250                255
Arg Pro Asp Ser Tyr Val Arg Asp Met Glu Ile Lys Gly Ala Ser His
                260                265                270
His Val Tyr Ala Asp Gln Pro His Ile Phe Asn Ala Val Val Glu Glu
                275                280                285
Ile Cys Asp Ser Val Asp
                290

```

<210> 3815

<211> 3669

<212> DNA

<213> Homo sapiens

<400> 3815

```

ngggagcagc tgcagccccc cccgcgcctc ccgggtccct tacgtctggc agctgcccag
60
ctcggggccgg tctgaccggg ttgggccgcc acgcctggcg ctgtgctggg aggagccgcc
120
gccagtccgc cggtcagtgc ctccctccag actcgggagg gtcgaggggg cgcgggagag
180
agcgcggggcg gccgccgggg ctggtcgcct gcagggatgg gggacgagcg gcccactac
240
tacgggaaac acggaacgcc acagaagtat gatccactt tcaaaggacc catttacaat
300
aggggctgca cggatatcat atgtgtgtg ttctgtctcc tggccattgt gggctacgtg
360
gctgtaggca tcatagcctg gactcatgga gaccctcgaa aggtgatcta cccactgat
420
agccggggcg agttctgcgg gcagaagggc acaaaaaacg agaacaaacc ctatctgttt
480
tatttcaaca ttgtgaaatg tgccagcccc ctggttctgc tggaattcca atgtccact
540
ccccagatct gcgtggaaaa atgccccgac cgctacctca cgtacctgaa tgctcgagc
600
tccggggact ttgagtacta taagcagttc tgtgttctct gttcaagaa caataaagga
660
gtggctgagg tgcttcgaga tggtgactgc cctgctgtcc tcatccccag caaacccttg
720
gcccgagat gcttccccgc tatccacgcc tacaaggggt tcctgatggg gggcaatgag
780
acgacctatg aggatgggca tggctcccg aaaaacatca cagacctggt ggagggcgcc
840
aagaaagcca atggagtcct agaggcgcg caactcgcca tgcgcatatt tgaagattac
900

```

accgtctctt ggtactggat tatcatagge ctggtcattg ccatggcgat gagcctcctg
960
ttcatcatcc tgcttcgctt cctggctggt attatggtct gggatgatgat catcatgggtg
1020
attctgggtgc tgggtctacgg aatatttcaac tgctacatgg agtactcccg actgcgtgggt
1080
gaggccggct ctgatgtctc tttgggtggac ctgggtttc agacggattt cggggtgtac
1140
ctgcacttac ggcagacctg gttggccttt atgatcattc tgagtatcct tgaagtcatt
1200
atcatcttgc tgctcatctt tctccggaag agaattctca tcgcgattgc actcatcaaa
1260
gaagccagca gggctgtggg atacgtcatg tgctccttgc tctaccact ggtcaccttc
1320
ttcttgcgtg gcctctgcat cgcctactgg gccagcactg ctgtcttcct gtccacttcc
1380
aacgaagcgg tctataagat ctttgatgac agccctgcc cantttactg cgaaaacctg
1440
nncaaccag agaccttccc ctctccaat gagtcccgcc aatgccccaa tgcccgttgc
1500
cagttcgctt tctacggtgg tgagtcgggc taccaccggg ccctgctggg cctgcagatc
1560
ttcaatgcct tcatgttctt ctgggtggcc aacttcgtgc tggcgctggg ccaggtcacg
1620
ctggccgggg cctttgcctc ctactactgg gccctgcgca agccggacga cctgccggcc
1680
ttcccgctct tctctgcctt tggccgggcg ctccaggtacc acacaggctc cctggccttt
1740
ggcgcgctca tcttgccat tgtgcagatc atccgtgtga tactcgagta cctggatcag
1800
cggtgaaag ctgcagagaa caagtttgcc aagtgcctca tgacctgtct caaatgctgc
1860
ttctgggtgc tggagaagtt catcaaattc cttaatagga atgcctacat catgattgcc
1920
atctacggca ccaatttctg cacctcggcc aggaatgcct tcttcctgct catgagaaac
1980
atcatcagag tggctgtcct ggataaagtt actgaacttc tcttcctgtt gggcaaactt
2040
ctgatcgttg gtagtgtggg gatccctggct ttcttcttct tcaccaccg tatcaggatc
2100
gtgcaggata cagcaccacc cctcaattat tactgggttc ctatactgac ggtgatcgtt
2160
ggctcctact tgattgcaca cggtttcttc agcgtctatg gcatgtgtgt ggacacgctg
2220
ttcctctgct tcttgaggga cctggagagg aatgacggct cggccgagag gccttacttc
2280
atgtcttcca cctcaagaa actcttgaac aagaccaaca agaaggcagc ggagtctga
2340
aggccccgtg ctccccacct ctcaaggagt ctcatgccgc aggggtgetca gtagctgggt
2400
ctgttcccc agcccttgg gctcacctga agtcctatca ctgccgtctt gccctcccc
2460
atgagccaga tcccaccagt ttctggacgt ggagagtctg gggcatctcc ttcttatgcc
2520

aaggggcgct tggagttttc atggctgccc ctccagactg cgagaaacaa gtaaaaaccc
2580
attggggcct cttgatgtct gggatggcac gtggcccgac ctccacaagc tccctcatgc
2640
ttcctgtccc ccgcttacac gacaacgggc cagaccacgg gaaggacggt gtttgtgtct
2700
gagggagctg ctggccacag tgaacaccca cgtttattcc tgcctgctcc ggccaggact
2760
gaaccccttc tccacacctg aacagttggc tcaagggccca ccagaagcat ttctttatta
2820
ttattatttt ttaacctgga catgcattaa aggtctctatt agctttcttt ccgtctgtct
2880
caacagctga gatggggccg ccaaggagtg ccttcctttt gctccctcct agctgggagt
2940
gacgggtggg agtgtgtgtg cccaggtggg ggtgtctcct ggctgggaag gagggaaagg
3000
gagggagagt ttgtcggggg ttggcagtgg agagcaggct ggagaggaga tggctaatag
3060
ctgtttaatg gaaacctgct gggctggagg gagttaggct gaatttcccg acttcctctg
3120
ccagttattg acacagctct ctttgtaaga gaggaagaa actaaacca cccaagggat
3180
gatttcaggg ggagaggtgg agggcagatg tcctgggcaa accgggcccc tctgccaca
3240
cacctcactt gatccttttg ccaaacttgt caaactcagg ggaactggct tcccagttgc
3300
ccctttgcca tattccaagt cccctcaga ctcatgtct ctgctcatca gactgtccc
3360
aggatcctgg agagggagaa cccctggccc caggggaaag aggggggggt ctcccgttc
3420
ctgtgcctgc accagccctg cccccattgc gtctgcacac ccctgcgtgt aactgcattc
3480
caaccactaa taaagtgcct attgtacagg tccaggcctg gtgtgtttgt tgggggcagt
3540
gagccagtgg cggctggtag ggggaacccc agcttccaag gccctaggag tctctgaact
3600
agggcgattc tctcaaaggg aacgaggagg gggcaggaaa cccactggct gctggctctg
3660
cctgaattc
3669

<210> 3816

<211> 707

<212> PRT

<213> Homo sapiens

<400> 3816

Met	Gly	Asp	Glu	Arg	Pro	His	Tyr	Tyr	Gly	Lys	His	Gly	Thr	Pro	Gln
1				5					10					15	
Lys	Tyr	Asp	Pro	Thr	Phe	Lys	Gly	Pro	Ile	Tyr	Asn	Arg	Gly	Cys	Thr
			20					25					30		
Asp	Ile	Ile	Cys	Cys	Val	Phe	Leu	Leu	Leu	Ala	Ile	Val	Gly	Tyr	Val
		35					40					45			
Ala	Val	Gly	Ile	Ile	Ala	Trp	Thr	His	Gly	Asp	Pro	Arg	Lys	Val	Ile

50						55						60					
Tyr 65	Pro	Thr	Asp	Ser	Arg 70	Gly	Glu	Phe	Cys	Gly 75	Gln	Lys	Gly	Thr	Lys 80		
Asn	Glu	Asn	Lys	Pro 85	Tyr	Leu	Phe	Tyr	Phe 90	Asn	Ile	Val	Lys	Cys 95	Ala		
Ser	Pro	Leu	Val 100	Leu	Leu	Glu	Phe	Gln	Cys	Pro	Thr	Pro	Gln	Ile	Cys		
Val	Glu	Lys	Cys 115	Pro	Asp	Arg	Tyr	Leu	Thr 120	Tyr	Leu	Asn	Ala	Arg	Ser		
Ser	Arg	Asp	Phe 130	Glu	Tyr	Tyr	Lys	Gln	Phe 135	Cys	Val	Pro	Gly	Phe	Lys		
Asn 145	Asn	Lys	Gly	Val 150	Ala	Glu	Val	Leu	Arg	Asp 155	Gly	Asp	Cys	Pro	Ala 160		
Val	Leu	Ile	Pro 165	Ser	Lys	Pro	Leu	Ala	Arg 170	Arg	Cys	Phe	Pro	Ala	Ile 175		
His	Ala	Tyr	Lys 180	Gly	Val	Leu	Met	Val	Gly 185	Asn	Glu	Thr	Thr	Tyr	Glu 190		
Asp	Gly	His	Gly 195	Ser	Arg	Lys	Asn	Ile	Thr 200	Asp	Leu	Val	Glu	Gly	Ala 205		
Lys	Lys	Ala	Asn 210	Gly	Val	Leu	Glu	Ala	Arg 215	Gln	Leu	Ala	Met	Arg	Ile 220		
Phe 225	Glu	Asp	Tyr	Thr 230	Val	Ser	Trp	Tyr	Trp	Ile 235	Ile	Ile	Gly	Leu	Val 240		
Ile	Ala	Met	Ala 245	Met	Ser	Leu	Leu	Phe	Ile 250	Ile	Leu	Leu	Arg	Phe	Leu 255		
Ala	Gly	Ile	Met 260	Val	Trp	Val	Met	Ile	Ile 265	Met	Val	Ile	Leu	Val	Leu 270		
Gly	Tyr	Gly	Ile 275	Phe	His	Cys	Tyr	Met	Glu 280	Tyr	Ser	Arg	Leu	Arg	Gly 285		
Glu	Ala	Gly	Ser 290	Asp	Val	Ser	Leu	Val	Asp 295	Leu	Gly	Phe	Gln	Thr	Asp 300		
Phe 305	Arg	Val	Tyr	Leu 310	His	Leu	Arg	Gln	Thr	Trp	Leu	Ala	Phe	Met	Ile 320		
Ile	Leu	Ser	Ile 325	Leu	Glu	Val	Ile	Ile	Ile 330	Leu	Leu	Leu	Ile	Phe	Leu 335		
Arg	Lys	Arg	Ile 340	Leu	Ile	Ala	Ile	Ala	Leu 345	Ile	Lys	Glu	Ala	Ser	Arg 350		
Ala	Val	Gly	Tyr 355	Val	Met	Cys	Ser	Leu	Leu 360	Tyr	Pro	Leu	Val	Thr	Phe 365		
Phe	Leu	Leu	Cys 370	Leu	Cys	Ile	Ala	Tyr	Trp 375	Ala	Ser	Thr	Ala	Val	Phe 380		
Leu	Ser	Thr	Ser 385	Asn	Glu	Ala	Val	Tyr	Lys 390	Ile	Phe	Asp	Asp	Ser	Pro 400		
Cys	Pro	Xaa	Tyr 405	Cys	Glu	Asn	Leu	Xaa	Asn 410	Pro	Glu	Thr	Phe	Pro	Ser 415		
Ser	Asn	Glu	Ser 420	Arg	Gln	Cys	Pro	Asn	Ala 425	Arg	Cys	Gln	Phe	Ala	Phe 430		
Tyr	Gly	Gly	Glu 435	Ser	Gly	Tyr	His	Arg	Ala 440	Leu	Leu	Gly	Leu	Gln	Ile 445		
Phe	Asn	Ala	Phe 450	Met	Phe	Phe	Trp	Leu	Ala 455	Asn	Phe	Val	Leu	Ala	Leu 460		
Gly	Gln	Val	Thr 465	Leu	Ala	Gly	Ala	Phe	Ala 470	Ser	Tyr	Tyr	Trp	Ala	Leu 475		
Arg	Lys	Pro	Asp 480	Asp	Leu	Pro	Ala	Phe	Pro 485	Leu	Phe	Ser	Ala	Phe	Gly 490		

485 490 495
 Arg Ala Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile
 500 505 510
 Leu Ala Ile Val Gln Ile Ile Arg Val Ile Leu Glu Tyr Leu Asp Gln
 515 520 525
 Arg Leu Lys Ala Ala Glu Asn Lys Phe Ala Lys Cys Leu Met Thr Cys
 530 535 540
 Leu Lys Cys Cys Phe Trp Cys Leu Glu Lys Phe Ile Lys Phe Leu Asn
 545 550 555 560
 Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Thr Asn Phe Cys Thr
 565 570 575
 Ser Ala Arg Asn Ala Phe Phe Leu Leu Met Arg Asn Ile Ile Arg Val
 580 585 590
 Ala Val Leu Asp Lys Val Thr Asp Phe Leu Phe Leu Leu Gly Lys Leu
 595 600 605
 Leu Ile Val Gly Ser Val Gly Ile Leu Ala Phe Phe Phe Phe Thr His
 610 615 620
 Arg Ile Arg Ile Val Gln Asp Thr Ala Pro Pro Leu Asn Tyr Tyr Trp
 625 630 635 640
 Val Pro Ile Leu Thr Val Ile Val Gly Ser Tyr Leu Ile Ala His Gly
 645 650 655
 Phe Phe Ser Val Tyr Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe
 660 665 670
 Leu Glu Asp Leu Glu Arg Asn Asp Gly Ser Ala Glu Arg Pro Tyr Phe
 675 680 685
 Met Ser Ser Thr Leu Lys Lys Leu Leu Asn Lys Thr Asn Lys Lys Ala
 690 695 700
 Ala Glu Ser
 705

<210> 3817

<211> 419

<212> DNA

<213> Homo sapiens

<400> 3817

cgcgttggtac acaactggga ctttgagcct cgaaagggtt ctcgctgcag catgcgctac
 60
 ctggcgctga tgggtgtctcg gcccgctactc aggcctcggg agatcaaccc tctgctgttc
 120
 agctacgtgg aggagctggg ggagattcgc aagctgcgcc aggacatcct gctcatgaag
 180
 ccgtacttca tcacctgcag ggaggccatg gaggtcgtc tgctgctgca ggacctctg
 240
 gacgtgcacg ccggccgcct gggctgctcg ctcaccgaga tccacacgct cttegccaag
 300
 cacatcaagc tggactgcga gcggtgccag gccaaagggt tcgtgtgtga gctctgcaga
 360
 gagggcgacg tgctgttccc gttcgacagc cacacgtctg tgtgcgccga ctgcttcgc
 419

<210> 3818

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3818

Arg Val Val His Asn Trp Asp Phe Glu Pro Arg Lys Val Ser Arg Cys
 1 5 10 15
 Ser Met Arg Tyr Leu Ala Leu Met Val Ser Arg Pro Val Leu Arg Leu
 20 25 30
 Arg Glu Ile Asn Pro Leu Leu Phe Ser Tyr Val Glu Glu Leu Val Glu
 35 40 45
 Ile Arg Lys Leu Arg Gln Asp Ile Leu Leu Met Lys Pro Tyr Phe Ile
 50 55 60
 Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Asp Leu Leu
 65 70 75 80
 Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His Thr
 85 90 95
 Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala Lys
 100 105 110
 Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro Phe
 115 120 125
 Asp Ser His Thr Ser Val Cys Ala Asp Cys Phe
 130 135

<210> 3819

<211> 1731

<212> DNA

<213> Homo sapiens

<400> 3819

actcctcccc ctccaggaat gttcatttgt ttggagcctt gggcatccat ctcacagggg
 60
 agtttgacat ctctactcc cagagcttcg ctcttatatt tcttcacaaa ctgctccatc
 120
 tccttcacct ctctgggaga caactcatgg cactttgaag ggtcctgggc atgtgcaggg
 180
 agctgctttg ccagctgctt cttccggtac tgtgccccct ctgagcctgc tactgggcgg
 240
 cggaagtctg acggcgccgg gcgagtggct gttgagcggc gccgcgggag ttccgcaggt
 300
 ttcccggtgt cgcagcggag ccggaggcca gctgaaccgc gccgtgggat cacggatagg
 360
 aggaggaggg gacccatagg acgcgttaac atggacctgg aaaacaaagt gaagaagatg
 420
 ggcttaggtc acgagcaagg atttggagcc ccttggttaa aatgcaaaga aaaatgtgaa
 480
 ggattcgaac tgcaactctg gagaaaaata tgtcgttaact gcaagtgtgg ccaagaagag
 540
 catgatgtcc tcttgagcaa tgaagaggat cgaaaagtgg gaaaactttt tgaagacacc
 600
 aagtatacca ctctgattgc aaaactaaag tcagatggaa tcccatgta taaacgcaat
 660
 gttatgatat tgacgaatcc agttgctgcc aagaagaatg tctccatcaa tacagttacc
 720
 tatgagtggg ctctcctgt ccagaatcaa gcattggcca ggcagtacat gcagatgcta
 780

cccaaggaaa agcagccagt agcaggctca gagggggcac agtaccggaa gaagcagctg
 840
 gcaaagcagc tccctgcaca tgaccaggac ccttcaaagt gccatgagtt gtctcccaga
 900
 gaggtgaagg agatggagca gtttgtgaag aaatataaga gcgaagctct gggagtagga
 960
 gatgtcaaac ttccctgtga gatggatgcc caaggcccca aacaaatgaa cattcctgga
 1020
 ggggatagaa gcaccccagc agcagtgggg gccatggagg acaaactctgc tgagcacaaa
 1080
 agaactcaat attcctgcta ttgctgcaaa ctgagtatga aagaaggatga ccagccatc
 1140
 tatgccgaaa gggctggcta tgataaactg tggcaccag cttgttttgt ctgcagcacc
 1200
 tgccatgaac tcctggttga catgatttat ttttggaaga atgagaagct atactgtggc
 1260
 agacattact gtgacagcga gaaacccga tgtgctggct gtgacgagct gatattcagc
 1320
 aatgagtata ccagggcaga aaaccagaat tggcacctga aacacttctg ctgctttgac
 1380
 tgtgatagca ttctagctgg ggagatatac gtgatggcca atgacaagcc cgtgtgcaag
 1440
 cctgtctatg tgaagaatca cgctgtggtg agaagtgttc taaggatatg gttgcctcag
 1500
 cctgcttttag gacttgagtt tatgcttttc ttaaagcctc ttacaaatgg gaaacagaaa
 1560
 gcagtcctcc taagtagaaa gcaaattatt cctaccacag ggtgttaaaa tcaaggcaat
 1620
 tcaaaaacaa tacatgcatt gactatgagc cacctcaaga tttctacttg tgaaatttac
 1680
 aatatcaatt ataggtactg cttaataata aaatcctcac ttaaaaaaaaa a
 1731

<210> 3820

<211> 535

<212> PRT

<213> Homo sapiens

<400> 3820

Thr	Pro	Pro	Pro	Pro	Gly	Met	Phe	Ile	Cys	Leu	Glu	Pro	Trp	Ala	Ser
1				5					10					15	
Ile	Ser	Gln	Gly	Ser	Leu	Thr	Ser	Pro	Thr	Pro	Arg	Ala	Ser	Leu	Leu
		20					25						30		
Tyr	Phe	Phe	Thr	Asn	Cys	Ser	Ile	Ser	Phe	Thr	Ser	Leu	Gly	Asp	Asn
		35					40					45			
Ser	Trp	His	Phe	Glu	Gly	Ser	Trp	Ser	Cys	Ala	Gly	Ser	Cys	Phe	Ala
	50					55				60					
Ser	Cys	Phe	Phe	Arg	Tyr	Cys	Ala	Pro	Ser	Glu	Pro	Ala	Thr	Gly	Arg
65				70					75				80		
Arg	Lys	Phe	Asp	Gly	Ala	Gly	Arg	Val	Ala	Val	Glu	Arg	Arg	Arg	Gly
			85				90					95			
Ser	Ser	Ala	Gly	Phe	Pro	Cys	Ser	Gln	Arg	Ser	Arg	Arg	Pro	Ala	Glu
		100					105					110			
Pro	Gly	Arg	Gly	Ile	Thr	Asp	Arg	Arg	Arg	Gly	Pro	Ile	Gly	Arg	

115	120	125
Val Asn Met Asp Leu Glu Asn Lys Val Lys Lys Met Gly Leu Gly His		
130	135	140
Glu Gln Gly Phe Gly Ala Pro Cys Leu Lys Cys Lys Glu Lys Cys Glu		
145	150	155
Gly Phe Glu Leu His Phe Trp Arg Lys Ile Cys Arg Asn Cys Lys Cys		
165	170	175
Gly Gln Glu Glu His Asp Val Leu Leu Ser Asn Glu Glu Asp Arg Lys		
180	185	190
Val Gly Lys Leu Phe Glu Asp Thr Lys Tyr Thr Thr Leu Ile Ala Lys		
195	200	205
Leu Lys Ser Asp Gly Ile Pro Met Tyr Lys Arg Asn Val Met Ile Leu		
210	215	220
Thr Asn Pro Val Ala Ala Lys Lys Asn Val Ser Ile Asn Thr Val Thr		
225	230	235
Tyr Glu Trp Ala Pro Val Gln Asn Gln Ala Leu Ala Arg Gln Tyr		
245	250	255
Met Gln Met Leu Pro Lys Glu Lys Gln Pro Val Ala Gly Ser Glu Gly		
260	265	270
Ala Gln Tyr Arg Lys Lys Gln Leu Ala Lys Gln Leu Pro Ala His Asp		
275	280	285
Gln Asp Pro Ser Lys Cys His Glu Leu Ser Pro Arg Glu Val Lys Glu		
290	295	300
Met Glu Gln Phe Val Lys Lys Tyr Lys Ser Glu Ala Leu Gly Val Gly		
305	310	315
Asp Val Lys Leu Pro Cys Glu Met Asp Ala Gln Gly Pro Lys Gln Met		
325	330	335
Asn Ile Pro Gly Gly Asp Arg Ser Thr Pro Ala Ala Val Gly Ala Met		
340	345	350
Glu Asp Lys Ser Ala Glu His Lys Arg Thr Gln Tyr Ser Cys Tyr Cys		
355	360	365
Cys Lys Leu Ser Met Lys Glu Gly Asp Pro Ala Ile Tyr Ala Glu Arg		
370	375	380
Ala Gly Tyr Asp Lys Leu Trp His Pro Ala Cys Phe Val Cys Ser Thr		
385	390	395
Cys His Glu Leu Leu Val Asp Met Ile Tyr Phe Trp Lys Asn Glu Lys		
405	410	415
Leu Tyr Cys Gly Arg His Tyr Cys Asp Ser Glu Lys Pro Arg Cys Ala		
420	425	430
Gly Cys Asp Glu Leu Ile Phe Ser Asn Glu Tyr Thr Gln Ala Glu Asn		
435	440	445
Gln Asn Trp His Leu Lys His Phe Cys Cys Phe Asp Cys Asp Ser Ile		
450	455	460
Leu Ala Gly Glu Ile Tyr Val Met Val Asn Asp Lys Pro Val Cys Lys		
465	470	475
Pro Cys Tyr Val Lys Asn His Ala Val Val Arg Ser Val Leu Arg Ile		
485	490	495
Trp Leu Pro Gln Pro Ala Leu Gly Leu Glu Phe Met Leu Phe Leu Lys		
500	505	510
Pro Leu Thr Asn Gly Lys Gln Lys Ala Val Leu Leu Ser Arg Lys Gln		
515	520	525
Ile Ile Pro Thr Thr Gly Cys		
530	535	

<210> 3821
<211> 5212
<212> DNA
<213> Homo sapiens

<400> 3821
nggtataact ttgttttgc tttgtttcaca atttgggtta ataagagtga tttcatttac
60
ctcaagtgc atttcttcat aatgctgtgt aatgctaaag ctttgattat gtgcgtgtgt
120
ggtttttttc tccaataggc aattatttcc agtcagagaa ggaaaccagt gcctggcatt
180
ctcaccatct ttctacctac catgatcaag tgcttgctcag ttgaagtaca agccaaattg
240
cgttctggtt tggccataag ctctctgggc caatgtgttg aggaacttgc cctcaacagt
300
attgatgctg aagcaaaatg tgtggctgtc aggggaataa tggaaacctt ccaagttcaa
360
gtgatagaca atggatttgg gatggggagt gatgatgtag agaaagtggg aaatcgttat
420
ttcaccagta aatgccactc ggtacaggac ttggagaatc caaggtttta tggtttccga
480
ggagaggcct tggcaaatat tgctgacatg gccagtgcgtg tggaaatttc gtccaagaaa
540
aacaggacaa tgaaaacttt tgtgaaactg tttcagagtg gaaaagccct gaaagcttgt
600
gaagctgatg tgactagagc aagcgtggg actactgtaa cagtgtataa cctattttac
660
cagcttcctg taaggaggaa atgcatggac cctagactgg agtttgagaa ggtaggcag
720
agaatagaag ctctctcact catgcacctc tccatttctt tctctttgag aaatgatgtt
780
tctggttcca tggttcttca gctccctaaa accaaagacg tatgttcccg attttgtcaa
840
atztatggat tgggaaagtc ccaaaagcta agagaaataa gttttaaata taaagagttt
900
gagcttagtg gctatatcag ctctgaagca cattacaaca agaatatgca gtttttgttt
960
gtgaacaaaa gactagtttt aaggacaaag ctacataaac tcattgactt tttattaagg
1020
aaagaaagta ttatatgcaa gccaaagaat ggtcccacca gtaggcaaat gaattcaagt
1080
cttcggcacc ggtctacccc agaactctat ggcataatg taattaatgt gcagtgcaca
1140
ttctgtgagt atgatgtgtg catggagcca gccaaaactc tgattgaatt tcagaactgg
1200
gacactctct tgttttgcac tcaggaagga gtgaaaatgt ttttaaagca agaaaaatta
1260
tttgtggaat tatcaggtga ggatattaag gaatttagtg aagataatgg ttttagttta
1320
tttgatgcta ctcttcagaa gcgtgtgact tccgatgaga ggagcaattt ccaggaagca
1380
tgtataataa ttttagattc ctatgagatg ttttaatttc agtcaaaagc tgtgaaaaga
1440

aaaactactg cagaaaaagt aaacacacag agttctaggg attcagaagc taccagaaaa
1500
aatacaaatg atgcattttt gtacatttat gaatcagggtg gtccaggcca tagcaaaatg
1560
acagagccat ctttacaaaa caaagacagc tcttgctcag aatcaaagat gttagaacaa
1620
gagacaattg tagcatcaga agctggagaa aatgagaaac ataaaaaatc tttcctggaa
1680
catagctctt tagaaaaatc gtgtggaacc agtttagaaa tgtttttaag cccttttcag
1740
acaccatgtc actttgagga gagtgggcag gatctagaaa tatggaaaga aagtactact
1800
gttaatggca tggctgcca catcttgaaa aataatagaa ttcagaatca accaaagaga
1860
tttaaatgat ctactgaagt gggatgccag cctctgcctt ttgcaacaac attatgggga
1920
gtacatagtg ctacagacaga gaaagagaaa aaaaaagaat ctagcaattg tggaagaaga
1980
aatgttttta gttatgggag agttaaatga tgttccactg gctttataac tcatgtagta
2040
caaaatgaaa aaactaaatc aactgaaaca gaacattcat ttaaaaatta tgtagacct
2100
ggccccacac gtgcccaaga aacatttggg aatagaacac gtcattcagt tgaaactcca
2160
gacatcaaag atttagccag cactttaagt aaagaatctg gtcaattgcc caacaaaaaa
2220
aattgcagaa cgaatataag ttatgggcta gagaatgaac ctacagcaac ttatacaatg
2280
ttttctgctt ttcaggaagg tagcaaaaaa tcacaaacag attgcatatt atctgatata
2340
tccccctctt tccccggta tagacacgtt tccaatgata gtaggaaaac agataaatta
2400
attggtttct ccaaaccaat cgtccgtaag aagctaagct tgagttcaca gctaggatct
2460
ttagagaagt ttaagaggca atatgggaag gttgaaaatc ctctggatac agaagtagag
2520
gaaagtaatg gagtcactac caatctcagt cttcaagttg aacctgacat tctgctgaag
2580
gacaagaacc gcttagagaa ctctgatgtt tgtaaaatca ctactatgga gcatagtgat
2640
tcagatagta gttgtcaacc agcaagccac atccttgact cagagaagtt tccattctcc
2700
aaggatgaag attgtttaga acaacagatg cctagtgtga gagaaagtcc tatgacctg
2760
aaggagtat ctctctttaa tagaaaacct ttggacctg agaagtcac tgaatcacta
2820
gcctctaaat tatccagact gaagggttcc gaaagagaaa ctcaaacaat ggggatgatg
2880
agtcgtttta atgaacttcc aaattcagat tccagtagga aagacagcaa gttgtgcagt
2940
gtgttaacac aagatttttg tatgttatat aacaacaagc atgaaaaaac agagaatggt
3000
gtcatcccaa catcagatte tgccacacag gataattcct ttaataaaaa tagtaaaaca
3060

cattctaaca gcaataacaac agagaactgt gtgatatcag aaactccttt ggtattgccc
3120
tataataatt ctaaagttac cggtaaagat tcagatgttc ttatcagagc ctcagaacaa
3180
cagataggaa gtcttgactc tcccagtggg atgttaatga atccggtaga agatgccaca
3240
ggtgacaaaa atggaatttg ttttcagagt gaggaatcta aagcaagagc ttgttctgaa
3300
actgaagagt caaacacgtg ttgttcagat tggcagcggc atttcgatgt agccctggga
3360
agaatggttt atgtcaacaa aatgactgga ctcagcacat tcattgcccc aactgaggac
3420
attcaggctg cttgtactaa agacctgaca actgtggctg tggatgttgt acttgagaat
3480
gggtctcagt acagggtgtca accttttaga agcgaccttg ttcttccttt ccttccgaga
3540
gctcgagcag agaggactgt gatgagacag gataacagag atactgtgga tgatactgtt
3600
agtagcgaat cgcttcagtc tttgttctca gaatgggaca atccagtatt tgcccgttat
3660
ccagagggtg ctgttgatgt aagcagtggc caggctgaga gcttagcagt taaaattcac
3720
aacatcttgt atccctatcg tttcaccaaa ggaatgattc attcaatgca ggttctccag
3780
caagtagata acaagtttat tgctgtttg atgagcacta agactgaaga gaatggcgag
3840
gcagattcct acgagaagca acaggcacia ggctctggtc ggaaaaaatt actgtcttct
3900
actctaattc ctccgctaga gataacagtg acagaggaac aaaggagact cttatggtgt
3960
taccacaaaa atctggaaga tctgggcctt gaatttgtat ttccagacac tagtgattct
4020
ctggctcctg tgggaaaagt accactatgt tttgtggaaa gagaagccaa tgaacttcgg
4080
agaggaagat ctactgtgac caagagtatt gtggaggaat ttatccgaga acaactggag
4140
ctactccaga ccaccggagg catccaaggg acattgccac tgactgtcca gaagggttg
4200
gcattcccaag cctgccatgg ggccattaag tttaatgatg gcctgagctt acaggaaagt
4260
tgccgcctta ttgaagctct gtcctcatgc cagctgccat tccagtgtgc tcacgggaga
4320
ccttctatgc tgccgttagc tgacatagac cacttggaac aggaaaaaca gattaaacct
4380
aacctcacta aacttcgcaa aatggcccag gcctggcgtc tctttggaaa agcagagtgt
4440
gatacaaggc agagcctgca gcagtccatg cctccctgtg agccaccatg agaacagaat
4500
cactgggtcta aaaggaacaa agggatgttc actgtatgcc tctgagcaga gagcagcagc
4560
agcaggtacc agcagggccc tgactgaatc agcccagtgt cctgagcag cttagacagc
4620
agggtctct gtatcagtct ttcttgagca gatgattccc ctagttgagt agccagatga
4680

aattcaagcc taaagacaat tcattcattt gcatccatgg gcacagaagg ttgctatata
4740
gtatctacct ttgtacttt atttaatgat aaaatttaat gacagtttga aaaaaaaaaa
4800
aaaaaaaaatt atttgaaggg gtgggtgatt ttgtttttt tacagttttt ttccaagctt
4860
cacatttgcg tgtatctaatt tcagctgatg ctcaagtcca aggggtagtc tgccttccca
4920
ggctgcccc agggtttctg cactgggtccc ctcttttccc ttcagtcttc ttcacttccc
4980
tatgctgctg ctcatgtgc tacatctcag acttaagag tttctctact acagtgaaaa
5040
cattctctag ggtctttcat caggccttta gttattttag ggataaaaac tattgataaa
5100
aaggacaagg atagaacaga gaaaatttaa agtcctgttc cgggtttttt gttatgtttt
5160
ctttaaaaac tcagagactg atgttcaata tcccaaacca gtaaaatggt ga
5212

<210> 3822

<211> 375

<212> PRT

<213> Homo sapiens

<400> 3822

Met	Val	Tyr	Val	Asn	Lys	Met	Thr	Gly	Leu	Ser	Thr	Phe	Ile	Ala	Pro
1				5					10					15	
Thr	Glu	Asp	Ile	Gln	Ala	Ala	Cys	Thr	Lys	Asp	Leu	Thr	Thr	Val	Ala
			20					25					30		
Val	Asp	Val	Val	Leu	Glu	Asn	Gly	Ser	Gln	Tyr	Arg	Cys	Gln	Pro	Phe
			35				40					45			
Arg	Ser	Asp	Leu	Val	Leu	Pro	Phe	Leu	Pro	Arg	Ala	Arg	Ala	Glu	Arg
			50			55				60					
Thr	Val	Met	Arg	Gln	Asp	Asn	Arg	Asp	Thr	Val	Asp	Asp	Thr	Val	Ser
					70				75					80	
Ser	Glu	Ser	Leu	Gln	Ser	Leu	Phe	Ser	Glu	Trp	Asp	Asn	Pro	Val	Phe
				85					90					95	
Ala	Arg	Tyr	Pro	Glu	Val	Ala	Val	Asp	Val	Ser	Ser	Gly	Gln	Ala	Glu
			100					105					110		
Ser	Leu	Ala	Val	Lys	Ile	His	Asn	Ile	Leu	Tyr	Pro	Tyr	Arg	Phe	Thr
			115				120					125			
Lys	Gly	Met	Ile	His	Ser	Met	Gln	Val	Leu	Gln	Gln	Val	Asp	Asn	Lys
			130				135					140			
Phe	Ile	Ala	Cys	Leu	Met	Ser	Thr	Lys	Thr	Glu	Glu	Asn	Gly	Glu	Ala
					150					155					160
Asp	Ser	Tyr	Glu	Lys	Gln	Gln	Ala	Gln	Gly	Ser	Gly	Arg	Lys	Lys	Leu
				165					170					175	
Leu	Ser	Ser	Thr	Leu	Ile	Pro	Pro	Leu	Glu	Ile	Thr	Val	Thr	Glu	Glu
				180					185					190	
Gln	Arg	Arg	Leu	Leu	Trp	Cys	Tyr	His	Lys	Asn	Leu	Glu	Asp	Leu	Gly
				195			200					205			
Leu	Glu	Phe	Val	Phe	Pro	Asp	Thr	Ser	Asp	Ser	Leu	Val	Leu	Val	Gly
			210				215					220			
Lys	Val	Pro	Leu	Cys	Phe	Val	Glu	Arg	Glu	Ala	Asn	Glu	Leu	Arg	Arg

```

225          230          235          240
Gly Arg Ser Thr Val Thr Lys Ser Ile Val Glu Glu Phe Ile Arg Glu
          245          250          255
Gln Leu Glu Leu Leu Gln Thr Thr Gly Gly Ile Gln Gly Thr Leu Pro
          260          265          270
Leu Thr Val Gln Lys Val Leu Ala Ser Gln Ala Cys His Gly Ala Ile
          275          280          285
Lys Phe Asn Asp Gly Leu Ser Leu Gln Glu Ser Cys Arg Leu Ile Glu
          290          295          300
Ala Leu Ser Ser Cys Gln Leu Pro Phe Gln Cys Ala His Gly Arg Pro
305          310          315          320
Ser Met Leu Pro Leu Ala Asp Ile Asp His Leu Glu Gln Glu Lys Gln
          325          330          335
Ile Lys Pro Asn Leu Thr Lys Leu Arg Lys Met Ala Gln Ala Trp Arg
          340          345          350
Leu Phe Gly Lys Ala Glu Cys Asp Thr Arg Gln Ser Leu Gln Gln Ser
          355          360          365
Met Pro Pro Cys Glu Pro Pro
370          375

```

<210> 3823

<211> 6280

<212> DNA

<213> Homo sapiens

<400> 3823

```

nnggggtgccc actgcctcct cgtcccccctc cccccaagca acaacaacaa caacaactcc
60
aagcacaccg gccataagag tgcgtgtgtc cccaacatga ccgaacgaag aagggacgag
120
ctctctgaag agatcaacaa cttaagagag aaggctcatga agcagtcgga ggagaacaac
180
aacctgcaga gccaggtgca gaagctcaca gaggagaaca ccacccttcg agagcaagtg
240
gaaccacccc ctgaggatga ggatgatgac atcgagctcc gcggtgctgc agcagctgct
300
gccccacccc ctccaataga ggaagagtgc ccagaagacc tcccagagaa gttcgatggc
360
aaccacagaca tgctggctcc tttcatggcc cagtgccaga tcttcatgga aaagagcacc
420
agggatttct cagttgatcg tgtccgtgtc tgcttcgtga caagcatgat gaccggccgt
480
gctgcccgtt gggcctcagc aaagctggag cgctcccact acctgatgca caactacca
540
gctttcatga tggaaatgaa gcatgtcttt gaagaccctc agaggcgaga ggttgccaaa
600
cgcaagatca gacgcctgcg ccaaggcatg gggctctgtca tcgactactc caatgctttc
660
cagatgattg ccagggacct ggattggaac gagcctgcgc tgattgacca gtaccacgag
720
ggcctcagcg accacattca ggaggagctc tccacctcg aggtcgccaa gtcgctgtct
780
gctctgattg ggcagtgcat tcacattgag agaaggctgg ccagggtgc tgcagctcgc
840

```

aagccacgct cgccaccccg ggcgctgggtg ttgcctcaca ttgcaagcca ccaccaggta
900
gatccaaccg agccgggtggg aggtgcccgc atgcgcctga cgcaggaaga aaaagaaaga
960
cgcagaaagc tgaacctgtg cctctactgt ggaacaggag gtcactacgc tgacaattgt
1020
cctgccaaagg cctcaaagtc ttcgcccggc ggaaactccc cggccccgct gtagagggac
1080
cttcagcgcac cgggccagaa ataataaggt cccacaaga tgatgcctca tctccacact
1140
tgcaagtgat gctccagatt catcttccgg gcagacacac cctgttcgtc cgagccatga
1200
tcgattctgg tgcttctggc aacttcattg atcacgaata tgttgcctaa aatggaattc
1260
ctctaagaat caaggactgg ccaatacttg tggaagcaat tgatgggccc cccatagcat
1320
cggggcccagt tgtccacgaa actcacgacc tgatagttga cctgggagat caccgagagg
1380
tgctgtcatt tgatgtgact cagtctccat tcttccctgt cgtcctaggg gttcgtggc
1440
tgagcacaca tgatcccaat atcacatgga gcactcgatc tatcgtcttt gattctgaat
1500
actgccgcta ccactgccgg atgtattctc caataccacc atcgctccca ccaccagcac
1560
cacaaccgcc actctattat ccagtagatg gatacagagt ttaccaacca gtgaggtatt
1620
actatgtcca gaatgtgtac actccagtag atgagcacgt ctaccagat caccgcctgg
1680
ttgacctca catagaaatg atacctggag cacacagtat tcccagtga catgtgtatt
1740
cactgtccga acctgaaatg gcagctcttc gagattttgt ggcaagaaat gtaaaagatg
1800
ggctaattac tccaacgatt gcacctaatg gagcccaagt tctccagggt aagaggggggt
1860
ggaaaactgca agtttcttat gattgccgag ctccaaacaa ttttactatc cagaatcagt
1920
atcctcgct atctattcca aatttagaag accaagcaca cctggcaacg tacactgaat
1980
tcgtacctca aatacctgga taccaaact atccacata tgccgcgtac ccgacctacc
2040
cagtaggatt cgctgggtac ccagtgggac gagacggaca aggaagatca ctatatgtac
2100
ctgtgatgat cacttggaaat ccacactggt accgccagcc tccggtacca cagtaccgc
2160
cgccacagcc gccgcctcca ccaccaccac cgccgcgcc tccatcttac agtaccctgt
2220
aaatacctgt catgtccttc aggatctctg ccctcaaaat ttattcctgt tcagcttctc
2280
aatcagtga tgtgtgctaa attttaggct actgtatctt caggccacct gaggcacatc
2340
ctctctgaaa cggctatgga aggttagggc cactctggac tggcacacat cctaaagcac
2400
caaaagacct tcaacatttt ctgagagcaa cagagtattt gccataaat gatctctcat
2460

ttttccacct tgactgccaa tctaactaaa ataattaata agtttacttt ccagccagtc
2520
ctggaagtct ggggttttacc tgccaaaacc tccatcacca tctaaattat aggctgccaa
2580
atttgctggt taacatttac agagaagctg atacaaacgc aggaaatgct gatttcttta
2640
tggaggggga gacgaggagg aggaggacat gacttttctt gcggtttcgg taccctcttt
2700
ttaaatacact ggaggactga ggccttatta aggaatccaa aattatcggg gcagtgtgga
2760
aaggcttcgg tgatcctctc gctgcaccct tagaaacttc accgtcttca aactccattt
2820
ccatgggtct gttaattctc aaggagcagc aactcgactg gttctcccag gaggaggaaa
2880
aacccttggtg acatgaaaca tctcaggcct gaaaagaaag tgctctctca gatggactct
2940
tgcattgtta gactatgtct tcacatcatg gtgcaaatca catgtaccca atgactccgg
3000
ctttgacaca acaccttacc atcatcatgc catgatggct tccacaaagc attaaacctg
3060
gtaaccagag attactgggtg gctccagcgt tgtagatgt tcatgaaatg tgaccacctc
3120
tcaatcacct ttgagggtta aagagtagca catcaaaagg actccaaaat cccataccca
3180
actcttaaga gatttgtcct ggtacttcag aaagaatttt catgagtgtt cttaattggc
3240
tggaaaagca ccagctgacg ttttgaaga atctatccat gtgtctgcct ccatatgcat
3300
ctgggcattt catcttcagt cccctcatta gactgtagca ttaggatgtg tggagagagg
3360
agaaatgatt tagcacccag attcacactc ctatgcctgg aagggggaca tctttgaaga
3420
agaggaatta gggctgtgga cactgtcttg aggatgtgga cttccttagt gagctccaca
3480
ttacttgatg gtaaccactt caaaaggatc agaatccacg taatgaaaaa ggtccctcta
3540
gaggatggag ctgatgtgaa gctgccaatg gatgaaaagc ctcagaaagc aactcaaagg
3600
actcaaagca acggacaaca caagagttgt cttcagccca gtgacacctc tgatgtcccc
3660
tggagcttt gtgctaacct gggactgcct gacttctttt agcctgggtc cttgctacta
3720
ccttgaactg ttttatctaa cctctctttt tctgtttaat tctttgtac tgccattgac
3780
cctgctgcag gatttgtgtc attttctgc ctggttgctg agactccatt ttgctgccac
3840
acacagagat gtaagaggca ggctttaatt gccaaagcac agtttgagca gtagaaaaca
3900
acatgggtga tatctcaaat tgcctgacat gaagaggagt ctaacggtga agtttcactt
3960
ttcatcagca tcatctttca catgttcatt atcatccgct cttattcttg catgtttaaa
4020
cacttaaaat ttttagtata atttttagtg tgttttgaag tggtgactag gctttcaaaa
4080

acttccattg aattacaaag cactatccag ttcttattgt taaactaagt aaaaatgata
4140
agtaacatag tgtaaaatat tcctttactg tgaacttctt acaatgctgt gaatgagagg
4200
ctcctcagaa ctggagcatt tgtataataa ttcacctgtt tcactcttcaa ttttaacatc
4260
atatataatt tcaattctat caattgggcc tttaaaaatc atataaaagg atataaaatt
4320
tgaaaagaga aacctaatg gctatttaac ccaaaacaac ttttttttct cttcaatgga
4380
atcggaagc ttgtcaatca ctcatgtgtt ttagagtaac tactttttaa atgggtgcatt
4440
tgtgcttctg aactattttg aagagtcact tctgtttacc tcaagtatca attcatcctc
4500
catacatttg aattcaagtt gtttttttgt caaatctaca gttgtcaatt gatcttcaag
4560
ctgcagggtg cctagaaatg ggccgttgct tgtagccctg gcatgtgcac acggacattt
4620
gccaccactg caagcaaaag tctggagaag ttcaccaacg acaagaacga ttagggaaaa
4680
tatgctgctg tgggttaaca actcagaaag tccctgatcc acatttggct gtttactaaa
4740
gcttgtgatt aacttttttg cagtgtgtac tatgctctat tgctatatat gctatctata
4800
aatgtagatg ttaaggataa gtaattctaa atttattatt ctatagtttt gaagtttggg
4860
taagtttctt ttcactcaat tgattttatt tgttggttaac caaatctatg ttaattggat
4920
cctttaaatt ttttttggca tttccaaca aaaatggctt tattcataag aaaggaaaaa
4980
aatcaatgga atttgatata taaagaagtt agaaagggag caaaataaaa aacataaagg
5040
agatagatga attagtaagc aaatcagtag tcgagttttt caaactggca aaattaatta
5100
attgactttt agcccaaatt tacattgtta attaaatcaa gaaggaagaa gatctaagag
5160
ctccattga taggcaagcc tagagagaac tagctaaatt tatcatgcta ggatattgaa
5220
acacagaaag tttacataca tttatgaagg gtcaatttag tttggacagt gaggtatttg
5280
tcttagtgga aaaaaggaga attagtctga tcaaatcgtg aagtaatata gtgaacttgc
5340
agggtgcaca aataagaggg ccacatctat atgggtgcagt ctggaattct gtttaagttt
5400
gtaggtacct cttggacttc tgaattgac cagtgtgcat ccaccacaga catctcacat
5460
cagatacaga cagttccaag attgacaaca gagaacaacc tgctggaaag acctgggcag
5520
aaatggagag ccctgcggga accatgctac attttcatct aaagagagaa tgcacatctg
5580
atgagactga aagttctttg ttgttttaga ttgtagaatg gtattgaatt ggtctgtgga
5640
aaattgcatt gcttttattt ctttgtgtaa tcaagtttaa gtaatagggg atatatatac
5700

ataagcattt taggggtggga gggactatta agtaatttta agtgggtggg gttatttaga
 5760
 atgttagaat aatattatgt attagatatc gctataagtg gacatgcgta cttacttgta
 5820
 accctttacc ctataattgc tacccttaaa gatttcaa ataaactcggag ggaactgcag
 5880
 ggagaccaac ttatttagag cgaattggac atggataaaa accccagtgg gagaaagttc
 5940
 aaaggtgatt agattaataa tttaatagag gatgagtgac ctctgataaa ttactgctag
 6000
 aatgaacttg tcaatgatgg atggtaaatt ttcattggaag ttataaaagt gataaataaa
 6060
 aacccttgct tttacccttg tcagtagccc tctcctacc actgaacccc attgccctta
 6120
 cccctccttc taactttatt gctgtattct ctctactcta tatttctctc tatttgctaa
 6180
 tattgcattg ctgttacaat aaaaattcaa taaagattta gtgggtaagt gcaaaaaaaaa
 6240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 6280

<210> 3824

<211> 342

<212> PRT

<213> Homo sapiens

<400> 3824

Asn	Asn	Asn	Asn	Ser	Lys	His	Thr	Gly	His	Lys	Ser	Ala	Cys	Val	Pro
1				5				10					15		
Asn	Met	Thr	Glu	Arg	Arg	Arg	Asp	Glu	Leu	Ser	Glu	Glu	Ile	Asn	Asn
		20					25						30		
Leu	Arg	Glu	Lys	Val	Met	Lys	Gln	Ser	Glu	Glu	Asn	Asn	Asn	Leu	Gln
		35				40						45			
Ser	Gln	Val	Gln	Lys	Leu	Thr	Glu	Glu	Asn	Thr	Thr	Leu	Arg	Glu	Gln
		50				55					60				
Val	Glu	Pro	Thr	Pro	Glu	Asp	Glu	Asp	Asp	Ile	Glu	Leu	Arg	Gly	
65					70				75					80	
Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	Pro	Pro	Ile	Glu	Glu	Glu	Cys	Pro
				85					90					95	
Glu	Asp	Leu	Pro	Glu	Lys	Phe	Asp	Gly	Asn	Pro	Asp	Met	Leu	Ala	Pro
			100					105					110		
Phe	Met	Ala	Gln	Cys	Gln	Ile	Phe	Met	Glu	Lys	Ser	Thr	Arg	Asp	Phe
		115				120						125			
Ser	Val	Asp	Arg	Val	Arg	Val	Cys	Phe	Val	Thr	Ser	Met	Met	Thr	Gly
		130				135						140			
Arg	Ala	Ala	Arg	Trp	Ala	Ser	Ala	Lys	Leu	Glu	Arg	Ser	His	Tyr	Leu
145					150					155				160	
Met	His	Asn	Tyr	Pro	Ala	Phe	Met	Met	Glu	Met	Lys	His	Val	Phe	Glu
			165						170					175	
Asp	Pro	Gln	Arg	Arg	Glu	Val	Ala	Lys	Arg	Lys	Ile	Arg	Arg	Leu	Arg
			180					185					190		
Gln	Gly	Met	Gly	Ser	Val	Ile	Asp	Tyr	Ser	Asn	Ala	Phe	Gln	Met	Ile
		195					200					205			
Ala	Gln	Asp	Leu	Asp	Trp	Asn	Glu	Pro	Ala	Leu	Ile	Asp	Gln	Tyr	His

210	215	220
Glu Gly Leu Ser Asp His Ile Gln Glu Glu Leu Ser His Leu Glu Val		
225	230	235
Ala Lys Ser Leu Ser Ala Leu Ile Gly Gln Cys Ile His Ile Glu Arg		240
	245	250
Arg Leu Ala Arg Ala Ala Ala Ala Arg Lys Pro Arg Ser Pro Pro Arg		255
	260	265
Ala Leu Val Leu Pro His Ile Ala Ser His His Gln Val Asp Pro Thr		270
	275	280
Glu Pro Val Gly Gly Ala Arg Met Arg Leu Thr Gln Glu Glu Lys Glu		285
	290	295
Arg Arg Arg Lys Leu Asn Leu Cys Leu Tyr Cys Gly Thr Gly Gly His		300
305	310	315
Tyr Ala Asp Asn Cys Pro Ala Lys Ala Ser Lys Ser Ser Pro Ala Gly		320
	325	330
Asn Ser Pro Ala Pro Leu		335
	340	

<210> 3825

<211> 2051

<212> DNA

<213> Homo sapiens

<400> 3825

```

nggacacctc acaggtgcgc ctccgaggag agggagggcg ccctgcgctcc ggcagaggag
60
gcgagcatcc cgctcagggtg atgaggaacc cctcgcgcac ccagcgcaga aggctgctgc
120
cgccggagcg ctccattgtt tgaccacaac aagggccgga ttctcaccca ggatcctaag
180
gcctttgtag tccttcagcc actgtgggccc ctgcctctgc ctgttcttct ggaatgtctt
240
gggggttttg atcctgtcac tgtgacctgc aaatccaaga gacacatctt tggaagataa
300
gagagcttct tcaagaccaa aaaaggagac ggcatagatac ccatgtaggg aattccccaa
360
agcagggcctt gccatacctg gaccccgagg agcctgcttg ctggaaaggc tttcctgtct
420
gatgtgcagg aggcagaatg ccaaactgac tcttcaaggg gcaactgcag gggctcgaga
480
ccagccagca gtatctcatc cttcgatatac ggggatatac tgtacagtcc tttttctaga
540
agtgagacat acaagattac tctacaanga ggaagattcc aggggctcaa aaacgcaaag
600
gtttgcactt tgagagcccc ttggaatgtt gacaactcag gatctaaaac aaagttctgt
660
gttaatgagt tacagaattc acgtggaagt caatgtcact ttataatcga taataatact
720
gagtgaggaa cactatgcag gaagaaacct tccgtagaaa gacaggcagg gnnaaaagct
780
taggctgacc ttaaaacttac ctaatagagc aagcctgaga tagactgcca aaatggccaa
840
ataagagact ctatgaaata acagtcttgt aactgtagta atcataagga aattttctcc
900

```

ttgaaatcac gataccaaat aggaaaaatg atctacaagt gcccacatgtg tagggaattt
 960
 ttctctgaga gatgccgagg tggtcagtat cctgactttc agaggccttt ttttgtttgt
 1020
 ttttaattttt actagattga tattaaaaac tcatgtggag gaactcaagg aatgtttaga
 1080
 agaccaaaag tccccaatga caggaaacaaa agcaaccaat ttttaacttt ctcttctcat
 1140
 tcctgttttc attgatttcc cacatgtagt ccttttgctc aggaagtctt tggggaaatt
 1200
 aaggatcttt gaagctctga aataggtgat caggtttagt gtgtctgtca gctgtctaag
 1260
 aggttggaat atgaactact caagatagtc acgaaaatac tgaaagtgtg atttttcttt
 1320
 ccataattga attaatTTTT tctgtttgac tggaaggggt ttttgtataa ctaaaacctc
 1380
 agcgcataaa ggagatttaa aaggagcaca tgatttagtg ggtgggccat gaaactagag
 1440
 atgggatttg ggggtgaatt tgtcaatata tggattttta tccagacata tctgctaaca
 1500
 agccttttgt aagtcacttc agatactttt cctccttttt acaaagagag ggctggctta
 1560
 gttatttgcc aaagcccttt ccaggcctga attccacaag tacaatttac tgtagtgtct
 1620
 tatcactctt tcatgtcaca atagcgtgga gcattagaga aaagcctaga cttttagtgtg
 1680
 atagccagtt gaaatatcat tgatagaatt ttagtttttag gaaaaattgg tttgatttct
 1740
 agctttatta ctattaggta tgtgagcttg ggcaaatcgc ttaatctttg agtctagttt
 1800
 tctetcaaaa tgagaacatt aggctaaatg atttccgagt ttccagctag tcctagagtt
 1860
 ctatatctt acatagttga attattttat catgctgttg ctggggaata tgactaacco
 1920
 ttttgaagct actaatTTTA tgtcgagctt taaagtccat aattgttatc ttcagaaaaat
 1980
 attatttgac ctacagtatg tccaaatcaa ttttaataaaa tcgctttata acaggaaaaa
 2040
 aaaaaaaaaa a
 2051

<210> 3826

<211> 125

<212> PRT

<213> Homo sapiens

<400> 3826

Gly	Ile	Pro	Gln	Ser	Arg	Ala	Cys	His	Thr	Trp	Thr	Pro	Arg	Ser	Leu
1			5						10				15		
Leu	Ala	Gly	Lys	Ala	Phe	Leu	Ser	Asp	Val	Gln	Glu	Ala	Glu	Cys	Gln
		20						25				30			
Thr	Asp	Ser	Ser	Arg	Gly	Asn	Cys	Arg	Gly	Ser	Arg	Pro	Ala	Ser	Ser
	35					40				45					
Ile	Ser	Ser	Phe	Asp	Thr	Gly	Asp	Ile	Leu	Tyr	Ser	Pro	Phe	Ser	Arg

50 55 60
 Ser Glu Thr Tyr Lys Ile Thr Leu Gln Xaa Gly Arg Phe Gln Gly Leu
 65 70 75 80
 Lys Asn Ala Lys Val Cys Thr Leu Arg Ala Pro Trp Asn Val Asp Asn
 85 90 95
 Ser Gly Ser Lys Thr Lys Phe Cys Val Asn Glu Leu Gln Asn Ser Arg
 100 105 110
 Gly Ser Gln Cys His Phe Ile Ile Asp Asn Asn Thr Glu
 115 120 125

<210> 3827
 <211> 1245
 <212> DNA
 <213> Homo sapiens

<400> 3827
 nacgcgtgcc ggagcagcaa acccaggcca gcctgaaaag tcacctctgg cgctcagcgt
 60
 ctctggagag cgtggagtgt caactgttga tgactgggtt tatattgagg agccccgagc
 120
 gtgcagaaca agagtcccaa gtcagatgaa gaggccgaga gcactaaaga agctcagaat
 180
 gaattatttg aagcacaagg acagctgcag acctgggatt ctgaggactt tgggagcccc
 240
 cagaagtcct gcagcccctc ctttgacacc ccagagagcc agatccgggg cgtgtgggaa
 300
 gagctggggg tgggcagcag cggacacctg agcgagcagg agctggctgt ggtctgccag
 360
 agcgtcgggc tccagggact cgagaaagag gaactcgaag acctgtttta caaactggat
 420
 caagacggag acggcaaagt gagtcttgag gaattccagc ttggcctctt cagtcatgag
 480
 cccgcgtac ttctagagtc ttccactcgg gttaaaccga gcaaggcttg gtctcattac
 540
 cagggtccag aggagagcgg ctgccacacc accacaacct catccctcgt gtcctgtgc
 600
 tccagcctgc gcctcttctc cagcattgac gatggttctg gcttcgcttt tcctgatcag
 660
 gtcctggcca tgtggaccca ggaggggatt cagaatggca gggagatctt gcagagcctg
 720
 gacttcagcg tggacgagaa ggtgaacctt ctggagctga cctgggccct tgacaacgag
 780
 ctcatgacag tggacagtgc cgtccagcag gcagccctgg cctgctacca ccaggagctg
 840
 agctaccagc aagggcaggt ggagcagctg gcaagggagc gtgacaaggc aaggcaggac
 900
 ctggagaggg ccgagaagag gaacctggag tttgtgaaag agatggacga ctgccactcc
 960
 acctgggagc agctcacgga gaagaaaatc aagcatctgg agcaggggta ccgggaaagg
 1020
 ctgagcctcc tgcggctctga ggtggaggcg gagcgagagc tgttctggga gcaggcccac
 1080
 aggcagaggg ccgcgctgga gtgggacgtg gggcgctgc aggcctgagga ggctggcctc
 1140

cgcgagaagc tgaccctggc cctgaaggaa aacagtcgcc tacagaagga gattgtggaa
 1200
 atggtggaaa agcttttcgga ttcggagagg ctggccctga agctg
 1245

<210> 3828

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3828

Gly	Ala	Pro	Ser	Val	Gln	Asn	Lys	Ser	Pro	Lys	Ser	Asp	Glu	Glu	Ala
1				5					10				15		
Glu	Ser	Thr	Lys	Glu	Ala	Gln	Asn	Glu	Leu	Phe	Glu	Ala	Gln	Gly	Gln
			20					25					30		
Leu	Gln	Thr	Trp	Asp	Ser	Glu	Asp	Phe	Gly	Ser	Pro	Gln	Lys	Ser	Cys
		35					40					45			
Ser	Pro	Ser	Phe	Asp	Thr	Pro	Glu	Ser	Gln	Ile	Arg	Gly	Val	Trp	Glu
	50					55					60				
Glu	Leu	Gly	Val	Gly	Ser	Ser	Gly	His	Leu	Ser	Glu	Gln	Glu	Leu	Ala
65					70				75					80	
Val	Val	Cys	Gln	Ser	Val	Gly	Leu	Gln	Gly	Leu	Glu	Lys	Glu	Glu	Leu
			85					90					95		
Glu	Asp	Leu	Phe	Asn	Lys	Leu	Asp	Gln	Asp	Gly	Asp	Gly	Lys	Val	Ser
		100					105					110			
Leu	Glu	Glu	Phe	Gln	Leu	Gly	Leu	Phe	Ser	His	Glu	Pro	Ala	Leu	Leu
	115					120						125			
Leu	Glu	Ser	Ser	Thr	Arg	Val	Lys	Pro	Ser	Lys	Ala	Trp	Ser	His	Tyr
	130				135						140				
Gln	Val	Pro	Glu	Glu	Ser	Gly	Cys	His	Thr	Thr	Thr	Thr	Ser	Ser	Leu
145					150				155					160	
Val	Ser	Leu	Cys	Ser	Ser	Leu	Arg	Leu	Phe	Ser	Ser	Ile	Asp	Asp	Gly
			165					170					175		
Ser	Gly	Phe	Ala	Phe	Pro	Asp	Gln	Val	Leu	Ala	Met	Trp	Thr	Gln	Glu
	180						185					190			
Gly	Ile	Gln	Asn	Gly	Arg	Glu	Ile	Leu	Gln	Ser	Leu	Asp	Phe	Ser	Val
	195					200					205				
Asp	Glu	Lys	Val	Asn	Leu	Leu	Glu	Leu	Thr	Trp	Ala	Leu	Asp	Asn	Glu
	210				215						220				
Leu	Met	Thr	Val	Asp	Ser	Ala	Val	Gln	Gln	Ala	Ala	Leu	Ala	Cys	Tyr
225				230					235					240	
His	Gln	Glu	Leu	Ser	Tyr	Gln	Gln	Gly	Gln	Val	Glu	Gln	Leu	Ala	Arg
			245					250					255		
Glu	Arg	Asp	Lys	Ala	Arg	Gln	Asp	Leu	Glu	Arg	Ala	Glu	Lys	Arg	Asn
		260					265					270			
Leu	Glu	Phe	Val	Lys	Glu	Met	Asp	Asp	Cys	His	Ser	Thr	Leu	Glu	Gln
	275					280						285			
Leu	Thr	Glu	Lys	Lys	Ile	Lys	His	Leu	Glu	Gln	Gly	Tyr	Arg	Glu	Arg
	290				295						300				
Leu	Ser	Leu	Leu	Arg	Ser	Glu	Val	Glu	Ala	Glu	Arg	Glu	Leu	Phe	Trp
305				310					315					320	
Glu	Gln	Ala	His	Arg	Gln	Arg	Ala	Ala	Leu	Glu	Trp	Asp	Val	Gly	Arg
			325					330					335		
Leu	Gln	Ala	Glu	Glu	Ala	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Leu	Ala	Leu

	340		345		350										
Lys	Glu	Asn	Ser	Arg	Leu	Gln	Lys	Glu	Ile	Val	Glu	Met	Val	Glu	Lys
	355					360						365			
Leu	Ser	Asp	Ser	Glu	Arg	Leu	Ala	Leu	Lys	Leu					
	370					375									

<210> 3829

<211> 5713<212> DNA

<213> Homo sapiens

<400> 3829

```

naccggtgac tgtatcccggt ggtttctcac ttaggactct ttttatcccc acccagaaca
60
caggagtcct gacctgcggt ctgaagcatt tgaatacaa cggtcacatt taagaccctg
120
gaggaggagc tatttgggaa caatgaggag agcccagctt ttaaggagtt cttggacctg
180
ctggggggaca cgatcacact gcaggatttc aaagggtttcc gaggaggcct ggacgtgacc
240
cacggacaga caggggtgga atcagtgtac acaacattcc gggacagga gatcatgttt
300
cacgtttcca caaagctgcc atttaccgac ggagacgccc agcagctcca gagaaagaga
360
cacattggaa atgacatcgt ggccatcatc ttccaagagg aaaacacgcc gtttgtccca
420
gacatgatag cctccaattt cttacatgcc tacatcgtcg tgcaggtcga gacccagggc
480
acagagaccc catcctacaa ggtctctgtc actgcgcggg aagatgtgcc cacctttggt
540
ccacctctgc ccagtcccc cgttttccag aagggcccgg aattcaggga gtttctgctc
600
accaagctca ccaatgccga gaacgcctgc tgcaagtcgg acaagtttgc aaagctggag
660
gaccggacca gggctgccct cctggacaac cttcacgatg agctccacgc ccacacacag
720
gccatgctgg gactggggcc agaggaggac aagtttgaga atggaggcca cgggggggtc
780
ctggagtctt ttaagagggc catccgcgta cgcagccact ccatggagac catggtgggc
840
ggccagaaga agtcgcacag tgggggcatc cctggcagcc tcagcggggg catctccac
900
aacagcatgg aggtcaccaa gaccaccttc tcgcctccag tgggtggcggc aacggtgaag
960
aaccagtcac ggagtcccat caagcgacgc tcggggctct tccccgcct gcacacgggc
1020
tcagaaggcc agggcgacag ccgggcacga tgtgacagca catccagcac acccaagacc
1080
ccagatggtg gacactcttc tcaggagata aagtctgaga cctcatccaa tcccagctct
1140
ccagaaatct gcccacaaca ggagaagccc ttcataaagt tgaaggaaaa cggccgcgcc
1200
atctcccgt cctcctccag caccagcagc gtcagcagca ctgcaggga gggcgaggcc
1260

```

atggaggagg gcgacagtgg gggcagccag ccgtccacga cctcacccctt caagcaggag
1320
gtgtttgtct acagcccgtc cccgagcagc gagagcccca gcctgggggc agctgccacc
1380
ccgatcatca tgagccggag tcccacagat gccaaaagca gaaactcccc gagatcgaac
1440
ctgaaattcc gctttgacaa gctcagccat gccagctctg gtgcgggtca ctaatgtgaa
1500
agtggagtcc ttcgcctgtc caagggaatc ccctcttctg tcctggaaaa ggctcctgac
1560
ctcccagtgt gatgtccggg tcctttatca tcctattcat cctggagagg aaaagtgtcg
1620
ggcaaagggg gatctggggg gagctcagca gtgactgggg agctgggtctg cctcagagac
1680
agagttaggg gtgggagcag agcctcgggt agggctcttg ccacagggca gtgccttcct
1740
gaacgtggca ggctttacta ccaggaacgc actcgggtgt ggaggcccca tgttcccagg
1800
agccaagatt cgtagcatcc ttgaggccat cctgataaaa ttgggcgcta ttgccccgt
1860
agctctggag ctctaaaccg tctatctgct tctgtgctga acgcctttcc catctgctga
1920
cgtaggccca gggctgccct gccctgctg ccagtgtacc gtgagcgggg ctccagccag
1980
ttcaagctca gagccagagc tggacggggc agaactgcgc tgcacacttc ctggactgag
2040
gcggggactt tgggtccac ccggtttctc ctgattatgg ctgctgtggg gtgaggggag
2100
ggaggggag ccccgaggca gtctcttccc tttgagaaga tattttccca caaaggggtg
2160
ggaagccagg agtgagaagg aattcaggga gagcaaagga gccagtgtct agatgtgtct
2220
gtgttggttg aggaaaaact cgggcctgag ggccaggccg gagcccagg ctctgtgtac
2280
aatgggggtt caggggaagac gtcggtatct cccctccca cttactcgag gagagagggtg
2340
agggggggat gacttgctgg ttctgatcag gccctgggt ggggaagggg cacagtgtcc
2400
ctcagcagct tacgcccctg gagtcttggg gggcccagcc tggccctggg gccttttcca
2460
gctactgtgc ccttgggcag ctgcgtctgg ggtcaaccc cccaatctg tteccctctc
2520
cagctgcggg tctgtaggca gctgtcacat ctgaagggtt tctgcaacct ggaccccatc
2580
tgggtgtggg tcagaccctg tgaccacat gccaccccca ccctccacag agcccccttg
2640
ctgggacagc cagctcacct ccaaggacat cccctcctgg cttctccccc ttecgagtct
2700
gcagcgccgt gggtttctct gccgatgggc ccgggttggg gttaagggtg gcaccccca
2760
ggtacaacga gcctgaagag cccctttcag tgcagacggg gctgcagagt gacactggct
2820
gggcacctgc cccacgacca atgacaagga tttccagctg aatgctttat tcccataggg
2880

atctggacct gtgccaaga tataaatact acactttttt tttttttttt tttttaactg
2940
acattgtgaa attctcccta tagcttttgc cattcaagca acattgtgat ctttcttccc
3000
cgccacgtgt gtgggaatga ttgagtcctg tttgcaagct ggagaggagc tctccctttg
3060
ctagtacttt ctctaaagta ctagtctagt aaaatttatt cttgttagaa ggtcaacaaa
3120
atatctgttt agcttttatg aagagtcacc gtagcagccc ccacggctgg aaagaggcct
3180
gtacgttctg gacgcgtttt gttggctggg cttctggagg cactggcaag gtcaaactgc
3240
atttctttaa gaacagttgc aggatctggc ttgcctctgt gggaagccgg cattacaggt
3300
gcttgggtga tgggccgtgt cacattgcc a tctggggctcc tttggggttt ccagggtgtc
3360
accatgctgt cccatttggg aatcccatat ctgcctgtcc ccactgcgt ggctgaccct
3420
tgctgcctgc tgctcttgg gagggtttt tccctgcctc tgagctggtg ggcaggatgg
3480
ctgggtggcc ccagagaag cacagacctg ggatggggtc tccatgccc gtttgctgtt
3540
ggaatgatct gaacaggacc ccaaagcct cttccctctg gtcattgcctc actatctcta
3600
ggagctccat cctgtggctt ccagagtgtg cacttccagc ccacccgggc agtgctgaga
3660
gggaggagga gaacaaggat ggcccagcct cccctccctc ccctagacca cggggcgggc
3720
agctcgggtt cctggagggc tgtttccccc acgctgtccc tacatctgct ctgatctaaa
3780
atgtctttcc ttttatgctg cgcccagtct tggggctcaa agatttgccc aaacctcatt
3840
ggcctcgtg actaggetca tctagatggt gctcacgctg gtgtttgagg catttccact
3900
gtgatctcca cgaggggatg ttttccggga cacatctctg gctctgggaa ctgectgact
3960
cactgaagaa actacttttc aggcactgta gggtcaccca tatgcctcca gctcagttga
4020
cgcttaaaaa cagggtcaga aaagctcgcg atggaaggtc ttaatgagag tgtctgtcta
4080
tgccagtcac gtaaaatgac gtttcttgaa aaagattcag tggttcagct ttgtcagcat
4140
catctcaaca caagcctgct ggctcttttt agcatctcat ccaacctgt catcgccag
4200
atgagaaatc ttagccagg tgaggggagt aacttgcttg aggtcacaca gctggctgtt
4260
ggcaaagctg ggattagaac cctcaaccca gggtccttcc ctctgcagcg cctacatggg
4320
tggttgaaata agtggctgcg tttcctgggg ccctgggttt tggggaagcc agttagctgc
4380
tgctttggca ctggcatgga ggtgagcagt caaggatgct ggtgaggccg cagtttctgc
4440
tctttttcat caggggggat agtctctagg atttttcagt gaggaccctt gggctttgga
4500

tgcagcttga accaagaaaa cgaggagggg aagggattca gtgaactatt cctcagtggg
 4560
 atcggttctt cagctcctga tgggggctgt gtaatggggg cagaggccag ggaaaaagat
 4620
 gctgttcacc caccctcagc ttcccttttc ctaaattaag aggaaaagtg gtcaaagaaa
 4680
 aactcttcat ttctccctga ttcttaagcg aaggtgggta atagaaactc aggtcccg
 4740
 gacaaggcag gacaagagcc tgtttcgctt tcctccctga ccctgccagg tgccaactca
 4800
 aacactacct ttctcattgg ttcttaagtc agtagagaca gatctgtttt aagcagttgg
 4860
 ggggttcgagt agatctcatg ggtacaggag gccagcaggg accaggccag tcagccatgc
 4920
 tcaggacccc tcggctcctc ccccgacctc tagctaccct gtatcgaggc aaggggaggc
 4980
 cagtaaagtt tgccaagcct gatcctgcag cctgggtggg ctggctggg tattctttta
 5040
 ccaaactctg ttttaccgcc agccccctgt acacccaat cccatgtctc cctcccttca
 5100
 gctggaccgt gtgccccctt gggaggaaga agacaagccc cactaggggc aagggcagca
 5160
 gagccctgcc gagtgaagg ctgtggggca gcggctctgt cctgtgcctt accagccctg
 5220
 gggaggggga catttgctg gaagactgga atttaattgc catcgtctt gattttgtga
 5280
 catttctgct tggaagtgtg aactaccctc cccccccgc ttctgtctcc ttagcatgag
 5340
 tgcagctctc tcctgttttg ggtgttcccc ttggacactc cagctcgggg actgctggcg
 5400
 tgtgagtgtg cagattcccc tgtgtggtcg aacctaaaga ctgtggcttg gaagtgatgc
 5460
 tccatgtgac gacgactttg cttctcttcc tcttagtgag gaggtgatcc gtagatccca
 5520
 actgcctatg taatgtaaata aatgtacatt taatttattg ctatggtagc acattgtatt
 5580
 tgtaaatgta caaaacaaat tctaaaagg tgaacaaatgt atattttgtt gcttaaatgt
 5640
 gtctttgcag aaattgacaa taaataacat attttgtgtc aaaaaaaaaa aaaaaaaaaa
 5700
 aaaaaaaaaa aaa
 5713

<210> 3830

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3830

Phe	Lys	Glu	Phe	Leu	Asp	Leu	Leu	Gly	Asp	Thr	Ile	Thr	Leu	Gln	Asp
1				5				10					15		
Phe	Lys	Gly	Phe	Arg	Gly	Gly	Leu	Asp	Val	Thr	His	Gly	Gln	Thr	Gly
			20				25					30			
Val	Glu	Ser	Val	Tyr	Thr	Thr	Phe	Arg	Asp	Arg	Glu	Ile	Met	Phe	His

35 40 45
 Val Ser Thr Lys Leu Pro Phe Thr Asp Gly Asp Ala Gln Gln Leu Gln
 50 55 60
 Arg Lys Arg His Ile Gly Asn Asp Ile Val Ala Ile Ile Phe Gln Glu
 65 70 75 80
 Glu Asn Thr Pro Phe Val Pro Asp Met Ile Ala Ser Asn Phe Leu His
 85 90 95
 Ala Tyr Ile Val Val Gln Val Glu Thr Pro Gly Thr Glu Thr Pro Ser
 100 105 110
 Tyr Lys Val Ser Val Thr Ala Arg Glu Asp Val Pro Thr Phe Gly Pro
 115 120 125
 Pro Leu Pro Ser Pro Pro Val Phe Gln Lys Gly Pro Glu Phe Arg Glu
 130 135 140
 Phe Leu Leu Thr Lys Leu Thr Asn Ala Glu Asn Ala Cys Cys Lys Ser
 145 150 155 160
 Asp Lys Phe Ala Lys Leu Glu Asp Arg Thr Arg Ala Ala Leu Leu Asp
 165 170 175
 Asn Leu His Asp Glu Leu His Ala His Thr Gln Ala Met Leu Gly Leu
 180 185 190
 Gly Pro Glu Glu Asp Lys Phe Glu Asn Gly Gly His Gly Gly Phe Leu
 195 200 205
 Glu Ser Phe Lys Arg Ala Ile Arg Val Arg Ser His Ser Met Glu Thr
 210 215 220
 Met Val Gly Gly Gln Lys Lys Ser His Ser Gly Gly Ile Pro Gly Ser
 225 230 235 240
 Leu Ser Gly Gly Ile Ser His Asn Ser Met Glu Val Thr Lys Thr Thr
 245 250 255
 Phe Ser Pro Pro Val Val Ala Ala Thr Val Lys Asn Gln Ser Arg Ser
 260 265 270
 Pro Ile Lys Arg Arg Ser Gly Leu Phe Pro Arg Leu His Thr Gly Ser
 275 280 285
 Glu Gly Gln Gly Asp Ser Arg Ala Arg Cys Asp Ser Thr Ser Ser Thr
 290 295 300
 Pro Lys Thr Pro Asp Gly Gly His Ser Ser Gln Glu Ile Lys Ser Glu
 305 310 315 320
 Thr Ser Ser Asn Pro Ser Ser Pro Glu Ile Cys Pro Asn Lys Glu Lys
 325 330 335
 Pro Phe Met Lys Leu Lys Glu Asn Gly Arg Ala Ile Ser Arg Ser Ser
 340 345 350
 Ser Ser Thr Ser Ser Val Ser Ser Thr Ala Gly Glu Gly Glu Ala Met
 355 360 365
 Glu Glu Gly Asp Ser Gly Gly Ser Gln Pro Ser Thr Thr Ser Pro Phe
 370 375 380
 Lys Gln Glu Val Phe Val Tyr Ser Pro Ser Pro Ser Ser Glu Ser Pro
 385 390 395 400
 Ser Leu Gly Ala Ala Ala Thr Pro Ile Ile Met Ser Arg Ser Pro Thr
 405 410 415
 Asp Ala Lys Ser Arg Asn Ser Pro Arg Ser Asn Leu Lys Phe Arg Phe
 420 425 430
 Asp Lys Leu Ser His Ala Ser Ser Gly Ala Gly His
 435 440

<210> 3831

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3831

```

aaatttgttg cagaagtttc ttgccttggt ttttaaggct gaggagtgga aaacattctg
60
tgtgaacaat taagagagac ttgtggcaga agtagatttc tttggcattt gcacacagga
120
gtcagaaaaca aatgatgtcc atagcatttg gctgggctaa cgtctaaagt cgtagctttt
180
agacgagtat gagttctcac tctgtgttac ctgctgagtc cctgagggca tgtgagttca
240
gtcctgaaac agaccactg nccgtgtcac agatcccagc ttcgctaagc tcagcttttag
300
catggttatgg tttatcgttt ctccagctcc attccacaaa ctctcatata gatagaatta
360
atttcagtgt aaaaatggtg tcctctattc ttcagatacc taagttgtca tatctggggc
420
tgggagacat taaaaatatg gagcaaaaat actgcaacct gtgtatccaa cttttcatct
480
cttttcttct ccttacagtc cagacctttt agccctccca ttcattcttc cagccctcct
540
ccaatagcac ccttagcgcg ggctgaaagc acttcttcaa tatcggaac caattccttg
600
agcgcagcca cactcccac agttgagaat gaacagcctt cctcgtttg gggtgacaga
660
ggaaaggttt atttgacttt tgaaggttct tccaggggac ccagccccc aaccatggga
720
gctcag
726

```

<210> 3832

<211> 107

<212> PRT

<213> Homo sapiens

<400> 3832

```

Met Ser Ser His Ser Val Leu Pro Ala Glu Ser Leu Arg Ala Cys Glu
1          5          10          15
Phe Ser Pro Glu Thr Asp Pro Leu Xaa Val Ser Gln Ile Pro Ala Ser
20          25          30
Leu Ser Ser Ala Leu Ala Cys Tyr Gly Leu Ser Phe Leu Gln Leu His
35          40          45
Ser Thr Asn Ser His Ile Asp Arg Ile Asn Phe Ser Val Lys Met Val
50          55          60
Ser Ser Ile Leu Gln Ile Pro Lys Leu Ser Tyr Leu Gly Leu Gly Asp
65          70          75          80
Ile Lys Asn Met Glu Gln Lys Tyr Cys Asn Leu Cys Ile Gln Leu Phe
85          90          95
Ile Ser Phe Leu Leu Leu Thr Val Gln Thr Phe
100          105

```

<210> 3833

<211> 1764

<212> DNA

<213> Homo sapiens

<400> 3833

gctagcggca gcgccgggaa gcccaactggc gaggcggctt ctccggctcc tgcgagcgcc
60
ggcggcgggg ccagctcgca gccgcggaag aagctggtat ccgtctcgca ccaactgcaag
120
ggcaagatgc agctgggtggc tgacctgctg ctgctgtcga gcgaggcgcg gcccggtgctc
180
ttcgagggcc ccgcctcctc tgggtgccggc gccgagtcct tcgagcaggg ccgggacacc
240
atcatcgcgc gcaccaaggg gctctccatc ctcaaccacg acgtgcagag ccagctcaac
300
atgggcccgt tcggggaggc gggggacagc ctggtggagc tgggcgacct ggtgggtgctg
360
ctgaccgagt gctcgggccc cgccggcctat ctggccgctg tggccacgcc gggcgcccag
420
cccgcgcagc cgggcctggt ggaccgctac cgcgtgacgc gatgccgcca cgaggtggag
480
cagggttgcg ccgtgctgcg cgccacgccg ctggccgaca tgacgccgca gctgctgctg
540
gaggtgtcgc agggcctgtc gcgcaacctc aagttcctga cggacgcgtg cgccctgggc
600
agtgacaagt cacgggaccg cttttcgcgg gagcagttca agctgggcgt caagtgcattg
660
agcaccagcg cgtcggcgct gctggcctgc gtgcgcgagg tgaagggtggc gccagtgag
720
ctggcgcgca gccgctgtgc gctcttcagc gggcccctgg tcgaggcagt gagcgccctg
780
gtaggcttcg ccaccgagcc gcagttcctg ggtcgcgcgg cagctgtgag cgcgagggc
840
aaggcggtgc agaccgccat cctgggcggc gccatgagcg tgggtgcggc ctgcgtgctc
900
ctgaccaggt gcctcagga tctggcgag caccgccagc ggggcgcaa gatgtcgga
960
cacagggaga ggctgaggaa ctcggcctgc gccgtgtctg aaggctgcac cctgctatct
1020
caggctttaa gggagaggtc ttcgcccagg actttaccgc cagtgaattc caattctgtg
1080
aattagcacc ccacccccat accccttctt ccacccccag actaaaggaa gatacttact
1140
ctctgcccc ctccatttat accaaagaaa tcataggtga aaccacctac cctccccaac
1200
gttaaatgct cgagaggaa cttccacaag gcagggccat gcacgcaacc tgcacacgca
1260
cttgaggggc ccaggtgtct ctccaccagc ccccatgcag tagggactgg aagatatgtc
1320
atctgctggt tgtgttatca ctcccacccc ctaccaccag ccgtcttcgg gaatttctca
1380
actaaatttc attattgggc aggaaggagg tcatgggttc atttcatttt tgttttttgt
1440
gtttttaatt aaaagaaagg ttacctcagt ttccactcct tagacatgga tgtagctacc
1500

tttttttgta tgtctttttt ttttttaagc aatcgtgttg aattaggagt atacttggtg
 1560
 tggaaagagt atgaatttgc catgtgattt gcaaattgggg ggaagctact gtgagcgtgt
 1620
 gtttttttaa tttacactat agagtgattt ttttttcccc caacgtcaag tttttacctt
 1680
 gcatgtactg gagtatttat ttcattctatt aaaatgttat gtttctcaaa aaaaaaaaaa
 1740
 aaaaaaagtt ttgcctgtc gacc
 1764

<210> 3834

<211> 361

<212> PRT

<213> Homo sapiens

<400> 3834

Ala	Ser	Gly	Ser	Ala	Gly	Lys	Pro	Thr	Gly	Glu	Ala	Ala	Ser	Pro	Ala
1				5					10					15	
Pro	Ala	Ser	Ala	Gly	Gly	Gly	Ala	Ser	Ser	Gln	Pro	Arg	Lys	Lys	Leu
			20					25					30		
Val	Ser	Val	Cys	Asp	His	Cys	Lys	Gly	Lys	Met	Gln	Leu	Val	Ala	Asp
		35					40					45			
Leu	Leu	Leu	Leu	Ser	Ser	Glu	Ala	Arg	Pro	Val	Leu	Phe	Glu	Gly	Pro
	50					55					60				
Ala	Ser	Ser	Gly	Ala	Gly	Ala	Glu	Ser	Phe	Glu	Gln	Gly	Arg	Asp	Thr
65					70					75					80
Ile	Ile	Ala	Arg	Thr	Lys	Gly	Leu	Ser	Ile	Leu	Thr	His	Asp	Val	Gln
				85					90					95	
Ser	Gln	Leu	Asn	Met	Gly	Arg	Phe	Gly	Glu	Ala	Gly	Asp	Ser	Leu	Val
			100					105					110		
Glu	Leu	Gly	Asp	Leu	Val	Val	Ser	Leu	Thr	Glu	Cys	Ser	Ala	His	Ala
		115					120					125			
Ala	Tyr	Leu	Ala	Ala	Val	Ala	Thr	Pro	Gly	Ala	Gln	Pro	Ala	Gln	Pro
	130					135					140				
Gly	Leu	Val	Asp	Arg	Tyr	Arg	Val	Thr	Arg	Cys	Arg	His	Glu	Val	Glu
145					150					155					160
Gln	Gly	Cys	Ala	Val	Leu	Arg	Ala	Thr	Pro	Leu	Ala	Asp	Met	Thr	Pro
				165					170					175	
Gln	Leu	Leu	Leu	Glu	Val	Ser	Gln	Gly	Leu	Ser	Arg	Asn	Leu	Lys	Phe
		180						185					190		
Leu	Thr	Asp	Ala	Cys	Ala	Leu	Ala	Ser	Asp	Lys	Ser	Arg	Asp	Arg	Phe
		195				200						205			
Ser	Arg	Glu	Gln	Phe	Lys	Leu	Gly	Val	Lys	Cys	Met	Ser	Thr	Ser	Ala
	210					215					220				
Ser	Ala	Leu	Leu	Ala	Cys	Val	Arg	Glu	Val	Lys	Val	Ala	Pro	Ser	Glu
225					230						235				240
Leu	Ala	Arg	Ser	Arg	Cys	Ala	Leu	Phe	Ser	Gly	Pro	Leu	Val	Gln	Ala
			245						250					255	
Val	Ser	Ala	Leu	Val	Gly	Phe	Ala	Thr	Glu	Pro	Gln	Phe	Leu	Gly	Arg
		260						265					270		
Ala	Ala	Ala	Val	Ser	Ala	Glu	Gly	Lys	Ala	Val	Gln	Thr	Ala	Ile	Leu
	275						280						285		
Gly	Gly	Ala	Met	Ser	Val	Val	Ser	Ala	Cys	Val	Leu	Leu	Thr	Gln	Cys

```

      290              295              300
Leu Arg Asp Leu Ala Gln His Pro Asp Gly Gly Ala Lys Met Ser Asp
305              310              315              320
His Arg Glu Arg Leu Arg Asn Ser Ala Cys Ala Val Ser Glu Gly Cys
      325              330              335
Thr Leu Leu Ser Gln Ala Leu Arg Glu Arg Ser Ser Pro Arg Thr Leu
      340              345              350
Pro Pro Val Asn Ser Asn Ser Val Asn
      355              360

```

<210> 3835

<211> 2366

<212> DNA

<213> Homo sapiens

<400> 3835

```

naccggttcg atatccgccc ggagctccgg cgcagctcct ccaccttgga gctcatgaga
60
gcaggccttg tggtagagcag ggacgggtgca ccggacggcg ggatcgagca aatgggtctg
120
gccatggagc acggagggtc ctacgctcgg gcggggggca gctctcgggg ctgctggtat
180
tacctgcgct acttcttctc ctctgtctcc ctcatccaat tctcatcat cctggggctc
240
gtgctcttca tggcttatgg caacgtgcac gtgagcacag agtccaacct gcaggccacc
300
gagcgccgag ccgagggcct atacagtcag ctcttagggc tcacggcctc ccagtccaac
360
ttgaccaagg agctcaactt caccaccgcg gccaaaggatg ccacatgca gatgtggctg
420
aatgctcgcc ggcacctgga ccgcatcaat gccagcttcc gccagtgcc gggtagccgg
480
gtcatctaca cgaacaatca gaggtacatg gctgccatca tcttgagtga gaagcaatgc
540
agagatcaat tcaaggacat gaacaagagc tgcgatgcct tgctcttcat gctgaatcag
600
aaggtgaaga cgctggaggt ggagatagcc aaggagaaga ccatttgcac taaggataag
660
gaaagcgtgc tgctgaacaa acgcgtggcg gaggaacagc tggttgaatg cgtgaaaacc
720
cgggagctgc agcaccaaga gcgccagctg gccaaaggagc aactgcaaaa ggtgcaagcc
780
ctctgcctgc ccctggacaa ggacaagttt gagatggacc ttcgtaacct gtggagggac
840
tccattatcc caccgagcct ggacaacctg gggttacaacc tctaccatcc cctgggctcg
900
gaattggcct ccacccgagc agcctgcgac cacatgccc gacctatgag ctccaagggtg
960
gaggagctgg cccggagcct ccgggaggat atcgaacgcg tggcccgcga gaactcagac
1020
ctccaacgcc agaagctgga agcccagcag ggcttcgggg ccagtcagga ggcgaaacag
1080
aaggtggaga aggagggtca ggcccgggag gccaaagctcc aagctgaatg ctcccggcag
1140

```

acccagctag cgctggagga gaaggcgggtg ctgcggaagg aacgagacaa cctggccaag
 1200
 gagctggaag agaagaagag ggagggcggag cagctcagga tggagctggc catcagaaac
 1260
 tcagccctgg acacctgcat caagaccaag tcgcagccga tgatgccagt gtcaaggccc
 1320
 atgggcccctg tccccaaccc ccagcccatc gaccagcta gcctggagga gttcaagagg
 1380
 aagatcctgg agtcccagag gccccctgca ggcacccctg tagcccatc cagtggctga
 1440
 ggaggctcca ggctgagga ccaagggatg gcccgactcg gcggtttgag gaggatgcag
 1500
 ggatatgtc acagcgcccg acacaacccc ctcccgccgc cccaaccac ccagggccac
 1560
 catcagacaa ctccctgcat gcaaacccct agtacctct cacaccgca cccgcgcctc
 1620
 acgatccctc acccagagca caggcgccg gagatgacgt caccgaagca acggcgctga
 1680
 cgtcacatat caccgtggtg atggcgctac gtggccatgt agacgtcacg aagagatata
 1740
 gcgatggcgt cgtgcagatg cagcacgtcg cacacagaca tggggaactt ggcacgacgt
 1800
 cacaccgaga tgcagcaacg acgtcacggg ccatgtcgac gtcacacata ttaatgtcac
 1860
 acagacgcgg cgatggcatc acacagacgg tgatgatgtc acacacagac acagtgacaa
 1920
 cacacccat gacaacgaca cctatagata tggcaccaac atcacatgca cgcacgccc
 1980
 ttcacacaca cttctaccc aattctcacc tagtgtcacg tcccccgac cctggcacac
 2040
 gggccaaggt acccacagga tcccatcccc tcccgcacag ccctggggcc cagcacctcc
 2100
 cctcctccag cttcctggcc tcccagccac ttcctcacc ccagtgcctg gaccggagg
 2160
 tgagaacagg aagccattca cctccgctcc ttgagcgtga gtgtttccag gacccctcg
 2220
 gggccctgag ccgggggtga gggtcacctg ttgtcgggag gggagccact ccttctcccc
 2280
 caactcccag ccctgcctgt ggcccgttga aatgttggtg gcacttaata aatattagta
 2340
 aatccttaaa aaaaaaaaaa aaaaaa
 2366

<210> 3836

<211> 479

<212> PRT

<213> Homo sapiens

<400> 3836

Xaa	Ala	Phe	Asp	Ile	Arg	Pro	Glu	Leu	Arg	Arg	Ser	Ser	Ser	Thr	Leu
1				5				10						15	
Glu	Leu	Met	Arg	Ala	Gly	Leu	Val	Val	Ser	Arg	Asp	Gly	Ala	Pro	Asp
		20						25					30		
Gly	Gly	Ile	Glu	Gln	Met	Gly	Leu	Ala	Met	Glu	His	Gly	Gly	Ser	Tyr

		35						40						45					
Ala	Arg	Ala	Gly	Gly	Ser	Ser	Arg	Gly	Cys	Trp	Tyr	Tyr	Leu	Arg	Tyr				
	50					55					60								
Phe	Phe	Leu	Phe	Val	Ser	Leu	Ile	Gln	Phe	Leu	Ile	Ile	Leu	Gly	Leu				
65					70				75						80				
Val	Leu	Phe	Met	Val	Tyr	Gly	Asn	Val	His	Val	Ser	Thr	Glu	Ser	Asn				
				85					90					95					
Leu	Gln	Ala	Thr	Glu	Arg	Arg	Ala	Glu	Gly	Leu	Tyr	Ser	Gln	Leu	Leu				
				100				105					110						
Gly	Leu	Thr	Ala	Ser	Gln	Ser	Asn	Leu	Thr	Lys	Glu	Leu	Asn	Phe	Thr				
				115			120					125							
Thr	Arg	Ala	Lys	Asp	Ala	Ile	Met	Gln	Met	Trp	Leu	Asn	Ala	Arg	Arg				
	130					135						140							
Asp	Leu	Asp	Arg	Ile	Asn	Ala	Ser	Phe	Arg	Gln	Cys	Gln	Gly	Asp	Arg				
145					150					155					160				
Val	Ile	Tyr	Thr	Asn	Asn	Gln	Arg	Tyr	Met	Ala	Ala	Ile	Ile	Leu	Ser				
				165					170					175					
Glu	Lys	Gln	Cys	Arg	Asp	Gln	Phe	Lys	Asp	Met	Asn	Lys	Ser	Cys	Asp				
				180				185					190						
Ala	Leu	Leu	Phe	Met	Leu	Asn	Gln	Lys	Val	Lys	Thr	Leu	Glu	Val	Glu				
				195			200					205							
Ile	Ala	Lys	Glu	Lys	Thr	Ile	Cys	Thr	Lys	Asp	Lys	Glu	Ser	Val	Leu				
	210					215						220							
Leu	Asn	Lys	Arg	Val	Ala	Glu	Glu	Gln	Leu	Val	Glu	Cys	Val	Lys	Thr				
225					230					235					240				
Arg	Glu	Leu	Gln	His	Gln	Glu	Arg	Gln	Leu	Ala	Lys	Glu	Gln	Leu	Gln				
				245					250					255					
Lys	Val	Gln	Ala	Leu	Cys	Leu	Pro	Leu	Asp	Lys	Asp	Lys	Phe	Glu	Met				
				260				265					270						
Asp	Leu	Arg	Asn	Leu	Trp	Arg	Asp	Ser	Ile	Ile	Pro	Arg	Ser	Leu	Asp				
	275						280					285							
Asn	Leu	Gly	Tyr	Asn	Leu	Tyr	His	Pro	Leu	Gly	Ser	Glu	Leu	Ala	Ser				
	290					295					300								
Ile	Arg	Arg	Ala	Cys	Asp	His	Met	Pro	Ser	Leu	Met	Ser	Ser	Lys	Val				
305					310					315					320				
Glu	Glu	Leu	Ala	Arg	Ser	Leu	Arg	Ala	Asp	Ile	Glu	Arg	Val	Ala	Arg				
				325					330					335					
Glu	Asn	Ser	Asp	Leu	Gln	Arg	Gln	Lys	Leu	Glu	Ala	Gln	Gln	Gly	Leu				
				340				345					350						
Arg	Ala	Ser	Gln	Glu	Ala	Lys	Gln	Lys	Val	Glu	Lys	Glu	Ala	Gln	Ala				
	355						360					365							
Arg	Glu	Ala	Lys	Leu	Gln	Ala	Glu	Cys	Ser	Arg	Gln	Thr	Gln	Leu	Ala				
	370					375					380								
Leu	Glu	Glu	Lys	Ala	Val	Leu	Arg	Lys	Glu	Arg	Asp	Asn	Leu	Ala	Lys				
385					390														

465

470

475

<210> 3837

<211> 2084

<212> DNA

<213> Homo sapiens

<400> 3837

nagaggagggc ttttctctgg tgcttgccag atgcatgaag agactgatgg catgtggact
 60
 attcagaaaa ctgtggcaca ctgttgggtg caagggtgacc ttatgagatg ggctgacagt
 120
 ggggactgcc aactcatgtg tctgttttagc tcaccttttc ctgtgcccac cctccaaccc
 180
 cccaaccatg tgggaaggaa atgtttggcc ctctgaccct aactacatcc cacagactgg
 240
 gatggaaagg tgtctgagat taagaagaag atcaagtcca tcctgcctgg aaggtcctgt
 300
 gatctactgc aagacaccag ccacctgcct cccgagcact cggatgtggt gatcgtggga
 360
 ggtgggggtgc ttggcttgtc tgtggcctat tggtgaaga agctggagag cagacgaggt
 420
 gctattcgag tgctagtggg ggaacgggac cacacgtatt cacaggcctc caccgggctc
 480
 tcagtagggt ggatttgtca gcagttctca ttgcctgaga acatccagct ctccctcttt
 540
 tcagccagct ttctacggaa catcaatgag tacctggccg tagtcgatgc tcctccctg
 600
 gacctccggt tcaaccctc gggtacctc ttgctggctt cagaaaagga tgctgcagcc
 660
 atggagagca acgtgaaagt gcagaggcag gagggagcca aagtttctct gatgtctcct
 720
 gatcagcttc ggaacaagtt tccttgata aacacagagg gagtggcttt ggcgtcttat
 780
 gggatggagg acgaaggtt gtttgacccc tgggtgtctgc tccaggggct tcggcgaaag
 840
 gtccagtcct tgggagtcct tttctgccag ggagaggtga cacgttttgt ctcttcattc
 900
 caacgcatgt tgaccacaga tgacaaagcg gtggtcttga aaaggatcca tgaagtccat
 960
 gtgaagatgg accgcagcct ggagtaccag cctgtggaat gcgccattgt gatcaacgca
 1020
 gccggagcct ggtctgcgca aatcgagca ctggctggtg ttggagaggg gccgcctggc
 1080
 accctgcagg gcaccaagct acctgtggag ccgaggaaaa ggtatgtgta tgtgtggcac
 1140
 tgccccaggg gaccaggcct agagactccg cttgttgag acaccagtgg agcctatctt
 1200
 cgccgggaag gattaggtag caactaccta ggtggtcgta gcccactga gcaggaagaa
 1260
 ccggacccgg cgaacctgga agtggaccat gattttcttc aggacaaggt gtggccccat
 1320
 ttggccctga ggggtccagc ttttgagact ctgaagtgtt ttgtgcaccc gcaggttcag
 1380

agcgccctggg ccggtctatta cgactacaac acctttgacc agaatggcgt ggtggggcccc
 1440
 caccgcgtag ttgtcaacat gtactttgct actgggttca gtggtcacgg gctccagcag
 1500
 gcccttgga ttgggcgagc tgtagcagag atgggtactga agggcagggt ccagaccatc
 1560
 gacctgagcc ccttctctt taccgcgttt tacttgggag agaagatcca ggagaacaac
 1620
 atcatctgag catgtgtgct ctgcactggc tccactggct tgcacccctgg ctgtgttcac
 1680
 agccttggtt gctgcttcca tcttccccag tactgtgcca ggccctctcc ccctccccag
 1740
 tgtctctctc tctcaggcag gccattgcac ccatatggct gggcaggcac aggcagtgag
 1800
 gccgaggcca atagcgagt atgagcggga tccataggact gatctgtagc ccatgctgat
 1860
 gtcacccacc agggcaatcc atctggaggc ctgagcacc tggcccagga ctggcttcat
 1920
 cctggcactg accaggaaag actgcctctg accctcttag cagacagagc ccaggcatgg
 1980
 gagcactctg gggcagcctg gctcagggtt attgattttc gtctgtttac cctatccatt
 2040
 aatcaatata tgtaattaac tccttcaaaa aaaaaaaaaa aaaa
 2084

<210> 3838

<211> 468

<212> PRT

<213> Homo sapiens

<400> 3838

Leu	His	Pro	Thr	Asp	Trp	Asp	Gly	Lys	Val	Ser	Glu	Ile	Lys	Lys	Lys
1			5					10					15		
Ile	Lys	Ser	Ile	Leu	Pro	Gly	Arg	Ser	Cys	Asp	Leu	Leu	Gln	Asp	Thr
			20				25						30		
Ser	His	Leu	Pro	Pro	Glu	His	Ser	Asp	Val	Val	Ile	Val	Gly	Gly	Gly
		35				40					45				
Val	Leu	Gly	Leu	Ser	Val	Ala	Tyr	Trp	Leu	Lys	Lys	Leu	Glu	Ser	Arg
	50				55				60						
Arg	Gly	Ala	Ile	Arg	Val	Leu	Val	Val	Glu	Arg	Asp	His	Thr	Tyr	Ser
65				70					75					80	
Gln	Ala	Ser	Thr	Gly	Leu	Ser	Val	Gly	Gly	Ile	Cys	Gln	Gln	Phe	Ser
			85					90						95	
Leu	Pro	Glu	Asn	Ile	Gln	Leu	Ser	Leu	Phe	Ser	Ala	Ser	Phe	Leu	Arg
		100						105					110		
Asn	Ile	Asn	Glu	Tyr	Leu	Ala	Val	Val	Asp	Ala	Pro	Pro	Leu	Asp	Leu
		115					120						125		
Arg	Phe	Asn	Pro	Ser	Gly	Tyr	Leu	Leu	Leu	Ala	Ser	Glu	Lys	Asp	Ala
	130				135						140				
Ala	Ala	Met	Glu	Ser	Asn	Val	Lys	Val	Gln	Arg	Gln	Glu	Gly	Ala	Lys
145				150					155					160	
Val	Ser	Leu	Met	Ser	Pro	Asp	Gln	Leu	Arg	Asn	Lys	Phe	Pro	Trp	Ile
			165					170					175		
Asn	Thr	Glu	Gly	Val	Ala	Leu	Ala	Ser	Tyr	Gly	Met	Glu	Asp	Glu	Gly

[illegible]

<210> 3839

<211> 758

<212> DNA

<213> Homo sapiens

<400> 3839

```

nnacgcgtgc  aggactctct  ggaagtcacc  cttcccagca  aacaagagga  ggaggatgag
60
gaggaggagg  aggaggagaa  agaccagcct  gccgagatgg  agtaccttaa  ctctcgctgt
120
gtctttttca  cttatttcca  gggagacatt  gggtcagtag  tggatgaaca  cttctcaaga
180
gctttggggc  aagccatcac  cctccatcca  gaatctgcc  tttcaaaaag  caagatgggg
240
ctaacccccc  tatggcgaga  cagctcagct  ctctcaagcc  agcggaaatg  tttcccaact
300

```

tccttttggga ccagctctta ccagccccc cctgcacctt gtttgggggg agttcactct
 360
 gacttccagg tcaactggacc ccctggcacc ttttctgcag ctgatccag tccttggecg
 420
 ggacacaacc tgcacagac tggeccagcc cctccccctg ctgtgtctga gtctggcct
 480
 tatcctttga catctcaggt gagcccatcc tacagccata tgcacgacgt gtacatgcgg
 540
 caccaccacc ctcacgcccc catgcaccac cgccaccgcc accatcatca ccatcaccac
 600
 cctcctgctg gctctgccct ggatccatcc tatgggcctc tgcctgatgc ttcaagtgc
 660
 gcggccagga ttcctgctcc ccagtgtgac atcacaaga cagaaccaac tacagtcacc
 720
 tctgctacct cagcatgggc tggagccttt catggaac
 758

<210> 3840

<211> 252

<212> PRT

<213> Homo sapiens

<400> 3840

Xaa	Arg	Val	Gln	Asp	Ser	Leu	Glu	Val	Thr	Leu	Pro	Ser	Lys	Gln	Glu
1			5					10						15	
Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Lys	Asp	Gln	Pro	Ala	Glu		
		20					25			30					
Met	Glu	Tyr	Leu	Asn	Ser	Arg	Cys	Val	Leu	Phe	Thr	Tyr	Phe	Gln	Gly
		35					40					45			
Asp	Ile	Gly	Ser	Val	Val	Asp	Glu	His	Phe	Ser	Arg	Ala	Leu	Gly	Gln
	50					55				60					
Ala	Ile	Thr	Leu	His	Pro	Glu	Ser	Ala	Ile	Ser	Lys	Ser	Lys	Met	Gly
	65				70				75					80	
Leu	Thr	Pro	Leu	Trp	Arg	Asp	Ser	Ser	Ala	Leu	Ser	Ser	Gln	Arg	Asn
			85						90					95	
Ser	Phe	Pro	Thr	Ser	Phe	Trp	Thr	Ser	Tyr	Gln	Pro	Pro	Pro	Ala	
		100					105						110		
Pro	Cys	Leu	Gly	Gly	Val	His	Pro	Asp	Phe	Gln	Val	Thr	Gly	Pro	Pro
		115					120					125			
Gly	Thr	Phe	Ser	Ala	Ala	Asp	Pro	Ser	Pro	Trp	Pro	Gly	His	Asn	Leu
	130					135					140				
His	Gln	Thr	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Val	Ser	Glu	Ser	Trp	Pro
	145				150					155				160	
Tyr	Pro	Leu	Thr	Ser	Gln	Val	Ser	Pro	Ser	Tyr	Ser	His	Met	His	Asp
			165					170					175		
Val	Tyr	Met	Arg	His	His	His	Pro	His	Ala	His	Met	His	His	Arg	His
		180						185					190		
Arg	His	His	His	His	His	His	His	Pro	Pro	Ala	Gly	Ser	Ala	Leu	Asp
		195					200					205			
Pro	Ser	Tyr	Gly	Pro	Leu	Leu	Met	Pro	Ser	Val	His	Ala	Ala	Arg	Ile
	210					215					220				
Pro	Ala	Pro	Gln	Cys	Asp	Ile	Thr	Lys	Thr	Glu	Pro	Thr	Thr	Val	Thr
	225				230					235				240	
Ser	Ala	Thr	Ser	Ala	Trp	Ala	Gly	Ala	Phe	His	Gly				

245

250

<210> 3841
 <211> 367
 <212> DNA
 <213> Homo sapiens

<400> 3841
 ctgggaactc cccacacttc cgtgggcaac atcttggggt cattgatcgc tggctactgg
 60
 gtgtccacat gctggggcct gtctttcgtc gtgcctggag ccatcgtagc agccatgggg
 120
 atagtgtgct ttctcttctt cattgaacat ccgaacgacg tcaggtgctc ctccaccctg
 180
 gtgacgcact caaaaggcta tgagaatggt acaaacaggt tgagcctccc gaagccaatc
 240
 ttgaagagcg aaaagaacaa gcctctggac ccagagatgc agtgctgct gctctcagat
 300
 gggaagggtt ccattccccc gaaccacgtc gtcattctcc ccggggacgg tgggagtggc
 360
 ccggccg
 367

<210> 3842
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3842
 Leu Gly Thr Pro His Thr Ser Val Gly Asn Ile Leu Gly Ser Leu Ile
 1 5 10 15
 Ala Gly Tyr Trp Val Ser Thr Cys Trp Gly Leu Ser Phe Val Val Pro
 20 25 30
 Gly Ala Ile Val Ala Ala Met Gly Ile Val Cys Phe Leu Phe Leu Ile
 35 40 45
 Glu His Pro Asn Asp Val Arg Cys Ser Ser Thr Leu Val Thr His Ser
 50 55 60
 Lys Gly Tyr Glu Asn Gly Thr Asn Arg Leu Ser Leu Pro Lys Pro Ile
 65 70 75 80
 Leu Lys Ser Glu Lys Asn Lys Pro Leu Asp Pro Glu Met Gln Cys Leu
 85 90 95
 Leu Leu Ser Asp Gly Lys Gly Ser Ile His Pro Asn His Val Val Ile
 100 105 110
 Leu Pro Gly Asp Gly Gly Ser Gly Pro Ala
 115 120

<210> 3843
 <211> 712
 <212> DNA
 <213> Homo sapiens

<400> 3843
 ngctgtccgg cccgcagggc ggtcgaggtg ggaacggagc agccccgggg gcccccctga
 60

ggcgggcgagg ccgcgaaggg cgcggggctg gaggcccgcg gcgccatggc tcacgtcggc
 120
 tcccgcgaagc gctcgaggag tcgcagccgg tcccggggac gggggtcgga aaagagaaag
 180
 aagaagagca ggaaagacac ctgcaggaac tgctcggcct ccacatccca aggtcgcaag
 240
 gccagcacgg cccctggggc ggaggcctca ccttctccct gcacacaga gagaagcaag
 300
 cagaaggccc ggaggagaac aagatccagc tctctctctt cttcttccag ttcttctagc
 360
 tctcttctt cctcctcgtc ctctctctt tctccagtg atggccgga gaagcggggg
 420
 aagtacaagg acaagaggag gaagaagaag aagaagagga agaagctgaa gaagaagggc
 480
 aaggagaagg cggaagcaca gcaggcagag catcatccgc aaggtggtgg accctgagac
 540
 ggggcgcacc aggtctatta agggagatgg cgaggctcta gaggaaatcg taaccaaaga
 600
 acgacacaga gagatcaaca agcaagccac ccgagggggac tgcctggcct tccagatgcg
 660
 agctgggttg cttctgagg gccccgtgg caaggctgtg gacgacgtg gc
 712

<210> 3844

<211> 143

<212> PRT

<213> Homo sapiens

<400> 3844

Met	Ala	His	Val	Gly	Ser	Arg	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser
1				5				10					15		
Arg	Gly	Arg	Gly	Ser	Glu	Lys	Arg	Lys	Lys	Ser	Arg	Lys	Asp	Thr	
			20					25					30		
Ser	Arg	Asn	Cys	Ser	Ala	Ser	Thr	Ser	Gln	Gly	Arg	Lys	Ala	Ser	Thr
		35					40					45			
Ala	Pro	Gly	Ala	Glu	Ala	Ser	Pro	Ser	Pro	Cys	Ile	Thr	Glu	Arg	Ser
	50					55					60				
Lys	Gln	Lys	Ala	Arg	Arg	Arg	Thr	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser
65					70				75					80	
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
			85					90					95		
Ser	Ser	Asp	Gly	Arg	Lys	Lys	Arg	Gly	Lys	Tyr	Lys	Asp	Lys	Arg	Arg
		100						105					110		
Lys	Lys	Lys	Lys	Lys	Arg	Lys	Lys	Leu	Lys	Lys	Lys	Gly	Lys	Glu	Lys
		115					120					125			
Ala	Glu	Ala	Gln	Gln	Ala	Glu	His	His	Pro	Gln	Gly	Gly	Gly	Pro	
	130						135						140		

<210> 3845

<211> 2302

<212> DNA

<213> Homo sapiens

<400> 3845

nacgcgtggt tctgctgggc cttggttttg gctacttgga tccgctggtc cccacagacc
60
agccccggcag tacctgctgt gccccggctc aagcgggggtg gagaacacgg agctcgtcaa
120
gtcaccaggt gactacctga tgatgctgat gccaccagc caggaggagg agaaagacaa
180
gcctgtggcc cccagcaacg tcctgtcgat ggcccagctg cgcacgctgc ccctggccga
240
tcagatcaag atcctgatga agaattgtgaa ggtcatgcct tttgccaaact tgatgagcct
300
cctgggcccc tccatcgatt ccgtggctgt tctgcggggc atccagaagg tggcgtatgt
360
gggtccaaagg aactgggtgg tgaagagtga catcctatac cccaaggact cgtccagccc
420
tcacagcggc gtgcctgctg aggtgctctg cagggggccga gacttcgtta tgtggaagtt
480
cacgcagagc cgctgggtgg ttaggaaaga ggtggcaacc gtgaccaaac tctgcgccga
540
ggatgtgaag gacttcctgg agcacatggc cgtggtgagg atcaacaaag gctgggagtt
600
cattctgcct tatgatgggg agttcatcaa gaagcacccg gatgtgggtcc agcggcagca
660
catgctgtgg acgggtatcc aggccaaact ggaaaaagtc tataatcttg taaaggaaac
720
catgccaaag aagccggatg cacaatcagg gcctgccggg ctggtctctg gggaccagcg
780
gatccaagta gccaaaacca aggccagca gaaccacgcg ttgctggagc gggagctgca
840
gcggcggaag gagcagctgc gggtcctgc ggtcccgccc ggtgtcgga tcaaggagga
900
gcccgtgagc gaggaggcg aggaggacga ggagcaggag gcggaggagg agcccatgga
960
cacttcccc agcggcctcc acagcaagct ggccaacggg ctgcctctcg ggcgggctgc
1020
gggcacagac agcttcaacg ggcaaccgcc ccagggtgc gccagcacc ctgtggctcg
1080
ggaactgaag gccttcgtgg aggccacctt tcagagacag tttgtgtca cgctgagcga
1140
actcaagcgc ctcttcaatc tgcacttggc cagcctgcc cccggccaca cactcttcag
1200
cggcatctcg gaccgatgc tacaggacac ggtgctggcc gccggttgca agcagatact
1260
ggtgcctttt cccccccaga ctgctgcttc cccggatgag cagaagggtt ttgccctctg
1320
ggagtctgga gacatgagt atcagcatcg acaggttttg cttgaaattt tttccaaaaa
1380
ttaccgggta cgcgaaaca tgatccagtc tcggttgact caagagtgtg gagaagatct
1440
cagtaaacag gaggtggata aagtactaaa ggactgctgt gtaagctatg gtggcatgtg
1500
gtaccttaaa gggacagtac agtcttgaca atagtagcaa actactaacc cagcaaatct
1560
aagcccaagg aagaaggcg gaaccagaag tagggcctcg acttgcttca gacgacacag
1620

agcaagagga actgaccatc tcatgacctg tggcattgca cgggtgcagtg gacagaaggg
 1680
 attatcctca gccagtcgca gggtcagctt aagttagtta gatcactccc agaagagacc
 1740
 agctgggacc ttctttgcag tacaatttga aattcctgat gtattttgct tattatttgg
 1800
 ttctattctc ataataaaga gagtgtatac ttacatgggc aggatgataa aaatcatggt
 1860
 ttaatatattt cttttgtaaa cttaatgcc acaaggctta agttatgttt acaacatgaa
 1920
 gaaaacctca aagttcttaa tttttaaaat gcctagaaga caatatttag tcttggatta
 1980
 tctatctgct aagacctcca ccaatttcat taaaccaaat tgaattatc tattcttggg
 2040
 attctgtggc cacttcacct ttgacaacaa cctactttat gtagcagtct caactgttta
 2100
 catgaacct agcaaaaaaa tcagaatcaa atccatctcc ttttaatgtt tgcagaaaga
 2160
 tgcaaacaaa accaggtaag tatggaacaa tgtgtaagt aggttatcac actttgatgt
 2220
 aaaaatttct attttgtgta tttttaaaat aaatgcaaac actaaactaa aaaaaaaaaa
 2280
 aaaaaaaaaa aaaaaaaaaa aa
 2302

<210> 3846

<211> 197

<212> PRT

<213> Homo sapiens

<400> 3846

Ser	Cys	Lys	Gly	Asn	His	Ala	Lys	Glu	Ala	Gly	Cys	Thr	Ile	Arg	Ala
1				5					10					15	
Cys	Arg	Ala	Gly	Leu	Trp	Gly	Pro	Ala	Asp	Pro	Ser	Ser	Gln	Asn	Gln
		20						25					30		
Gly	Pro	Ala	Glu	Pro	Arg	Val	Ala	Gly	Ala	Gly	Ala	Ala	Ala	Ala	Glu
		35					40					45			
Gly	Ala	Ala	Ala	Gly	Ala	Cys	Gly	Pro	Ala	Arg	Cys	Ala	Asp	Gln	Gly
		50				55					60				
Gly	Ala	Arg	Glu	Arg	Gly	Gly	Arg	Gly	Gly	Arg	Gly	Ala	Gly	Gly	Gly
		65			70					75				80	
Gly	Gly	Ala	His	Gly	His	Phe	Pro	Gln	Arg	Pro	Pro	Gln	Gln	Ala	Gly
			85						90					95	
Gln	Arg	Ala	Ala	Ser	Arg	Ala	Gly	Cys	Gly	His	Arg	Gln	Leu	Gln	Arg
		100						105					110		
Ala	Pro	Ala	Pro	Gly	Leu	Arg	Gln	His	Pro	Cys	Gly	Ser	Gly	Thr	Glu
		115					120					125			
Gly	Leu	Arg	Gly	Gly	His	Leu	Ser	Glu	Thr	Val	Cys	Ala	His	Ala	Glu
		130				135					140				
Arg	Thr	Gln	Ala	Pro	Leu	Gln	Ser	Ala	Leu	Gly	Gln	Pro	Ala	Pro	Arg
		145			150					155				160	
Pro	His	Thr	Leu	Gln	Arg	His	Leu	Gly	Pro	His	Ala	Thr	Gly	His	Gly
			165					170					175		
Ala	Gly	Arg	Arg	Leu	Gln	Ala	Asp	Thr	Gly	Ala	Phe	Ser	Pro	Pro	Asp

180
Cys Cys Phe Pro Gly
195

185

190

<210> 3847
<211> 1570
<212> DNA
<213> Homo sapiens

<400> 3847
nnccatggtg ggcttgaggg tggggctgtc ctagagcatt aaacagctgt tgggccctgg
60
gctgaccccc ccaccctgca tgtgtggggg tccccacagc tcttatgttc ctccctggggc
120
ttctggaatt cctcctcctt aggcaagcct atcacagcat cctgaccctg ggggcctctg
180
tgcagctggt gtttggcttt gaggtaaaac tggcttggga ggttgagagg acaagccgca
240
ggtgacccca catgtgcctt gaataaccca acagaccctt cctcagcacc tgctatgtgg
300
ccaacctgtg ctggccacca aggggcagtg atcagatatg gctcctgccc tccacacgct
360
cactcctagg tgactgggga gacgcacaaa gaggctagga cagaggagga gcccacact
420
ggggctcagg agagggttcc tggaggctcg tgccggagct agctggtaat ggacaggaga
480
ggattagtgc catggacaac tggaggcgtg tccttggcag agagagaatg tgttcagtga
540
cgacagctca tatttgttga gtgcgaattt cacaccaggc cctatgctga gctcctgacc
600
tgcattctctt attcagcaag acaatactgt tataaaggaa cagttaatta tgtcatttta
660
tagataagta aactgaggtt cactgagttg ccaaaagtca cagctagtaa gtggaggggc
720
taggaggacc ctgggtgtgt ctagagcctg tgattgtacc actgcacctg ctgtgcagag
780
gccttgggga gcaatgtggg tgcagcaagg gggagctatg tgtttacatc cccctcgctc
840
ccctctccct tcagtatgcc atcctgatga cgatggtgct caccatcttc atcaagtatg
900
tgctgcactc cgtggacctc cagagtgaga acccctggga caacaaggct gtgtacatgc
960
tctacacaga gctgtttaca ggtgagaggg gcctgggcct ctctgatctt ggaccagcat
1020
cctccactct gcctcctggc cctgtgacct gctgctttct gcacccctc cctcaggct
1080
tcatcaaggt tctgctgtac atggccttca tgaccatcat gatcaagggt cacaccttcc
1140
cactctttgc catccggccc atgtacctgg ccatgaggtg agccccggcc tgtccccga
1200
tcctcctgac ctgatccctg ccctctctct gctttcactg actgtccttt cagacagttc
1260
aagaaagctg tgacagatgc catcatgtct cgccgagcca tccgcaacat gaacaccctg
1320

tatccagatg ccaccccaga ggagctccag gcaatggaca atgtctgcat catctgccga
 1380
 gaagagatgg tgactggtgc caagagactg ccctgcaacc acattttcca taccaggtgg
 1440
 gaggggccct ggggagcctg cccagcaggg cccaggcccc agaaggcagg ccctaaggga
 1500
 cctgctgacc tctgcctggc cttgaccgc agctgcctgc gctcctgggt ccagcggcag
 1560
 cagacctgcc
 1570

<210> 3848

<211> 120

<212> PRT

<213> Homo sapiens

<400> 3848

Pro	Asp	Pro	Val	Pro	Ser	Pro	Ala	Phe	Thr	Asp	Cys	Pro	Phe	Arg	Gln
1				5					10					15	
Phe	Lys	Lys	Ala	Val	Thr	Asp	Ala	Ile	Met	Ser	Arg	Arg	Ala	Ile	Arg
			20					25					30		
Asn	Met	Asn	Thr	Leu	Tyr	Pro	Asp	Ala	Thr	Pro	Glu	Glu	Leu	Gln	Ala
		35					40					45			
Met	Asp	Asn	Val	Cys	Ile	Ile	Cys	Arg	Glu	Glu	Met	Val	Thr	Gly	Ala
	50				55					60					
Lys	Arg	Leu	Pro	Cys	Asn	His	Ile	Phe	His	Thr	Arg	Trp	Glu	Gly	Pro
65					70					75				80	
Trp	Gly	Ala	Cys	Pro	Ala	Gly	Pro	Arg	Pro	Gln	Lys	Ala	Gly	Pro	Lys
			85					90					95		
Gly	Pro	Ala	Asp	Leu	Cys	Leu	Ala	Leu	Thr	Arg	Ser	Cys	Leu	Arg	Ser
		100						105					110		
Trp	Phe	Gln	Arg	Gln	Gln	Thr	Cys								
		115					120								

<210> 3849

<211> 1139

<212> DNA

<213> Homo sapiens

<400> 3849

cctgccgagg gccaggaatg agattaagga cggaacgcat gccctccaaa aagtggcatt
 60
 ttagaattta tacagcacc cagcacgctg ctaaactgtg gcacacaacc accacggccc
 120
 gatcacgcgc agcgggaacc cggctctctga gtccgccccg tgcgttgctg catcagagtc
 180
 acgccaceta atccattctc tcgggtcttcg tctgctccgg tattgcaact gctcagattg
 240
 gtcgatcctg ggccagcatg gcggcgccca tgtaaccggt tccgtgccgc aaagcgaacg
 300
 gcggccgcgg cgcggggccc gcgggggtta gaggtcacca tgctgagggg cgcgtggagg
 360
 acgctgagtt tgattcggac ccgggcagtt acccaggtcc tagtaccggg gctgccgggc
 420

ggtgggagcg ccaagtttcc tttaaccag tggggcctgc agcctcgaag tctcctcctc
 480
 caggccgcgc gcggatatgt cgtccggaaa ccagcccagt ctaggctgga tgatgaccca
 540
 cctccttcta cgctgctcaa agactaccag aatgtccctg gaattgagaa ggttgatgat
 600
 gtcgtgaaaa gactcttgtc tttggaaatg gccacaaga aggagatgct aaaaatcaag
 660
 caagaacagt ttatgaagaa gattgttgca aaccagagg acaccagatc cctggaggct
 720
 cgaattattg ccttgtctgt caagatccgc agttatgaag aacacttgga gaaacatcga
 780
 aaggacaaag ccacaaaacg ctatctgcta atgagcattg accagaggaa aaagatgctc
 840
 aaaaacctcc gtaacaccaa ctatgatgtc tttgagaaga tatgctgggg gctgggaatt
 900
 gagtacacct tccccctct gtattaccga agagcccacc gccgattcgt gaccaagaag
 960
 gctctgtgca ttccgggttt ccaggagact caaaagctga agaagcgaag aagagcctta
 1020
 aaggtgcag cagcagcca aaaacaagca aagcggagga acccagacag ccctgccaaa
 1080
 gccatacaa agacactcaa agacagccaa taaattctgt tcaatcattt aaaaaaaaaa
 1139

<210> 3850

<211> 257

<212> PRT

<213> Homo sapiens

<400> 3850

Met Leu Arg Val Ala Trp Arg Thr Leu Ser Leu Ile Arg Thr Arg Ala
 1 5 10 15
 Val Thr Gln Val Leu Val Pro Gly Leu Pro Gly Gly Gly Ser Ala Lys
 20 25 30
 Phe Pro Phe Asn Gln Trp Gly Leu Gln Pro Arg Ser Leu Leu Gln
 35 40 45
 Ala Ala Arg Gly Tyr Val Val Arg Lys Pro Ala Gln Ser Arg Leu Asp
 50 55 60
 Asp Asp Pro Pro Pro Ser Thr Leu Leu Lys Asp Tyr Gln Asn Val Pro
 65 70 75 80
 Gly Ile Glu Lys Val Asp Asp Val Val Lys Arg Leu Leu Ser Leu Glu
 85 90 95
 Met Ala Asn Lys Lys Glu Met Leu Lys Ile Lys Gln Glu Gln Phe Met
 100 105 110
 Lys Lys Ile Val Ala Asn Pro Glu Asp Thr Arg Ser Leu Glu Ala Arg
 115 120 125
 Ile Ile Ala Leu Ser Val Lys Ile Arg Ser Tyr Glu Glu His Leu Glu
 130 135 140
 Lys His Arg Lys Asp Lys Ala His Lys Arg Tyr Leu Leu Met Ser Ile
 145 150 155 160
 Asp Gln Arg Lys Lys Met Leu Lys Asn Leu Arg Asn Thr Asn Tyr Asp
 165 170 175
 Val Phe Glu Lys Ile Cys Trp Gly Leu Gly Ile Glu Tyr Thr Phe Pro

	180		185		190										
Pro	Leu	Tyr	Tyr	Arg	Arg	Ala	His	Arg	Arg	Phe	Val	Thr	Lys	Lys	Ala
	195					200						205			
Leu	Cys	Ile	Arg	Val	Phe	Gln	Glu	Thr	Gln	Lys	Leu	Lys	Lys	Arg	Arg
	210					215					220				
Arg	Ala	Leu	Lys	Ala	Ala	Ala	Ala	Ala	Gln	Lys	Gln	Ala	Lys	Arg	Arg
225					230					235				240	
Asn	Pro	Asp	Ser	Pro	Ala	Lys	Ala	Ile	Pro	Lys	Thr	Leu	Lys	Asp	Ser
				245					250					255	
Gln															

<210> 3851

<211> 1183

<212> DNA

<213> Homo sapiens

<400> 3851

```

nnacgcgttt tggcctgagt tggggagggg ggcggggagg gacctgcggc ttgcggcccc
60
gcccccttet ceggtcgcga gccgaccggt aagcccgctt cctcccacgg cggcccttgg
120
ggcctgtgtc gccgggcaac tccagccgag gcttgggctt ctgcctgcag gtgtctgcgg
180
cgaggccctt aggggtacagc ccgatttggc cccatggtgg gtttcggggc caaccggcgg
240
gctggccgcc tgccctctct cgtgctggtg gtgctgctgg tggatgatcgt cgtcctcgcc
300
ttcaactact ggagcatctc ctcccgccac gtctgtcttc aggaggaggt ggccgagctg
360
cagggccagg tccagcgcac cgaagtggcc cgcggggcggc tggaaaagcg caattcggac
420
ctcttgctgt tgggtggacac gcacaagaaa cagatcgacc agaaggaggc cgactacggc
480
cgcttcagca gccggctgca ggccagagag ggcctcggga agagatgcga ggatgacaag
540
gttaaaactac agaacaacat atcgtatcag atggcagaca tacatcattt aaaggagcaa
600
cttgctgagc ttcgtcagga atttcttcga caagaagacc agcttcagga ctataggaag
660
aacaatactt accttgtgaa gaggttagaa tatgaaagtt ttcagtgtgg acagcagatg
720
aaggaattga gagcacagca tgaagaaaat attaaaaagt tagcagacca gtttttagag
780
gaacaaaagc aagagaccca aaagattcaa tcaaatgatg gaaaggaatt ggatataaac
840
aatcaagtag tacctaaaaa tattccaaa gtagctgaga atgttgca gaagaatgaa
900
gaacctcaa gcaatcatat tccacatggg aaagaacaaa tcaaaagagg tggatgatgca
960
gggatgcctg gaatagaaga gaatgacctt gcaaaagttg atgatcttcc cctgcttta
1020
aggaagcctc ctatttcagt ttctcaacat gaaagtcac aagcaatctc ccatcttcca
1080

```

actggacaac ctctctcccc aaatatgcct ccagattcac acataaacca caatggaaac
 1140
 cccgggtactt caaaacagaa tccttccagt ccccttcacg cgt
 1183

<210> 3852
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 3852
 Met Val Gly Phe Gly Ala Asn Arg Arg Ala Gly Arg Leu Pro Ser Leu
 1 5 10 15
 Val Leu Val Val Leu Leu Val Val Ile Val Val Leu Ala Phe Asn Tyr
 20 25 30
 Trp Ser Ile Ser Ser Arg His Val Leu Leu Gln Glu Glu Val Ala Glu
 35 40 45
 Leu Gln Gly Gln Val Gln Arg Thr Glu Val Ala Arg Gly Arg Leu Glu
 50 55 60
 Lys Arg Asn Ser Asp Leu Leu Leu Val Asp Thr His Lys Lys Gln
 65 70 75 80
 Ile Asp Gln Lys Glu Ala Asp Tyr Gly Arg Leu Ser Ser Arg Leu Gln
 85 90 95
 Ala Arg Glu Gly Leu Gly Lys Arg Cys Glu Asp Asp Lys Val Lys Leu
 100 105 110
 Gln Asn Asn Ile Ser Tyr Gln Met Ala Asp Ile His His Leu Lys Glu
 115 120 125
 Gln Leu Ala Glu Leu Arg Gln Glu Phe Leu Arg Gln Glu Asp Gln Leu
 130 135 140
 Gln Asp Tyr Arg Lys Asn Asn Thr Tyr Leu Val Lys Arg Leu Glu Tyr
 145 150 155 160
 Glu Ser Phe Gln Cys Gly Gln Gln Met Lys Glu Leu Arg Ala Gln His
 165 170 175
 Glu Glu Asn Ile Lys Lys Leu Ala Asp Gln Phe Leu Glu Glu Gln Lys
 180 185 190
 Gln Glu Thr Gln Lys Ile Gln Ser Asn Asp Gly Lys Glu Leu Asp Ile
 195 200 205
 Asn Asn Gln Val Val Pro Lys Asn Ile Pro Lys Val Ala Glu Asn Val
 210 215 220
 Ala Asp Lys Asn Glu Glu Pro Ser Ser Asn His Ile Pro His Gly Lys
 225 230 235 240
 Glu Gln Ile Lys Arg Gly Gly Asp Ala Gly Met Pro Gly Ile Glu Glu
 245 250 255
 Asn Asp Leu Ala Lys Val Asp Asp Leu Pro Pro Ala Leu Arg Lys Pro
 260 265 270
 Pro Ile Ser Val Ser Gln His Glu Ser His Gln Ala Ile Ser His Leu
 275 280 285
 Pro Thr Gly Gln Pro Leu Ser Pro Asn Met Pro Pro Asp Ser His Ile
 290 295 300
 Asn His Asn Gly Asn Pro Gly Thr Ser Lys Gln Asn Pro Ser Ser Pro
 305 310 315 320
 Leu His Ala

<210> 3853
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 3853
 cgtacgcata tggccgatga aaataaaaat gaatatgctg cacaattaca aaactttaat
 60
 ggagaacaac ataaacattt ttatgtagtg attcctcaga tttacaagca actacaagaa
 120
 atggacgaac gaaggactat taaactcagt gagtgttaca gaggatttgc tgactcagaa
 180
 cgcaaagtta ttcccatcat ttcaaaatgt ttggaaggaa tgattcttgc agcaaaatca
 240
 gttgatgaaa gaagagactc tcaaattggtg gtagactcct tcaaattctgg ttttgaacct
 300
 ccaggagact ttccatttga agattacagt caacatatat atagaacat tttctgatggg
 360
 actatcagtg catcc
 375

<210> 3854
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 3854
 Arg Thr His Met Ala Asp Glu Asn Lys Asn Glu Tyr Ala Ala Gln Leu
 1 5 10 15
 Gln Asn Phe Asn Gly Glu Gln His Lys His Phe Tyr Val Val Ile Pro
 20 25 30
 Gln Ile Tyr Lys Gln Leu Gln Glu Met Asp Glu Arg Arg Thr Ile Lys
 35 40 45
 Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val Ile
 50 55 60
 Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys Ser
 65 70 75 80
 Val Asp Glu Arg Arg Asp Ser Gln Met Val Val Asp Ser Phe Lys Ser
 85 90 95
 Gly Phe Glu Pro Pro Gly Asp Phe Pro Phe Glu Asp Tyr Ser Gln His
 100 105 110
 Ile Tyr Arg Thr Ile Ser Asp Gly Thr Ile Ser Ala Ser
 115 120 125

<210> 3855
 <211> 1377
 <212> DNA
 <213> Homo sapiens

<400> 3855
 naagctgcga ccatggcaac ctacaaccag ctctctctatg cccagaaggc caagtaccac
 60
 ctgtgctcag caggctggct ggagaccggg cgggttgctt accccacagc cttcgctccc
 120

cagaactgtg gctctggtgt ggttgggata gtggactatg gacctagacc caacaagagt
 180
 gaaatgtggg atgtcttctg ctatcggatg aaagatgtga actgcacctg caaggtgggg
 240
 tatgtgggag atggcttctc atgcagtggg aacctgtctc aggtcctgat gtccttcccc
 300
 tcaactcaca acttctctgac ggaagtgtct gcctattcca acagctcagc tcgaggccgt
 360
 gcatttctag aacacctgac tgacctgtcc atccgcggca cctcttttgt gccacagaac
 420
 agtgggctgg gggagaatga gacctgtctt gggcgggaca tcgagcacca cctcgccaat
 480
 gtcagcatgt ttttctacaa tgacctgtc aatggcacn accctgcaaa cgagggtggg
 540
 aagcaagctg ctcactctg ccagccagga cccactnncc aaccgacgga gaccaggttt
 600
 gttgatggaa gagccattct gcagtgggac atctttgcct ccaatgggat cattcatgtc
 660
 atttccaggc ctttaaaagc accccctgcc cccgtgacct tgaccacac tggcttggga
 720
 gcagggatct tctttgcoat catcctggtg actggggctg ttgccttggc tgcttactcc
 780
 tactttcgga taaaccggag aacaatcggc ttccagcatt ttgagtcgga agaggacatt
 840
 aatgttgag ctcttgga gacagcgcct gagaatatct cgaacccctt gtatgagagc
 900
 acaacctcag ctccccaga accttctac gacccttca cggactctga agaacggcag
 960
 cttgagggca atgacctt gaggacactg tgagggcctg gacgggagat gccagccatc
 1020
 actcactgcc acctgggcca tcaactgtga attctcagca ccagttgcct tttaggaacg
 1080
 taaagtctt taagcactca gaagccatac ctcatctctc tggctgatct gggggttgtt
 1140
 tctgtgggtg agagatgtgt tgctgtgccc acccagtaca gtttctctct ctgaccttt
 1200
 ggctcttctt cctttgtact cttcagctgg cacctgtctc attctgcct acatgatggg
 1260
 taactgtgat ctttcttccc tgtagattg taagcctcg tctttgtatc ccagccccta
 1320
 gccagtgcc tgacacagga actgtgcaca ataaaggttt atggaacaga aacaaaa
 1377

<210> 3856

<211> 330

<212> PRT

<213> Homo sapiens

<400> 3856

Xaa	Ala	Ala	Thr	Met	Ala	Thr	Tyr	Asn	Gln	Leu	Ser	Tyr	Ala	Gln	Lys
1				5				10					15		
Ala	Lys	Tyr	His	Leu	Cys	Ser	Ala	Gly	Trp	Leu	Glu	Thr	Gly	Arg	Val
			20					25					30		
Ala	Tyr	Pro	Thr	Ala	Phe	Ala	Ser	Gln	Asn	Cys	Gly	Ser	Gly	Val	Val

```

      35      40      45
Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp
  50      55      60
Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Cys Lys Val Gly
  65      70      75      80
Tyr Val Gly Asp Gly Phe Ser Cys Ser Gly Asn Leu Leu Gln Val Leu
      85      90      95
Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr
      100      105      110
Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp
      115      120      125
Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly
      130      135      140
Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn
      145      150      155      160
Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Xaa Pro Ala
      165      170      175
Asn Glu Gly Gly Lys Gln Ala Ala His His Cys Gln Pro Gly Pro Thr
      180      185      190
Xaa Gln Pro Thr Glu Thr Arg Phe Val Asp Gly Arg Ala Ile Leu Gln
      195      200      205
Trp Asp Ile Phe Ala Ser Asn Gly Ile Ile His Val Ile Ser Arg Pro
      210      215      220
Leu Lys Ala Pro Pro Ala Pro Val Thr Leu Thr His Thr Gly Leu Gly
      225      230      235      240
Ala Gly Ile Phe Phe Ala Ile Ile Leu Val Thr Gly Ala Val Ala Leu
      245      250      255
Ala Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Arg Thr Ile Gly Phe Gln
      260      265      270
His Phe Glu Ser Glu Glu Asp Ile Asn Val Ala Ala Leu Gly Lys Gln
      275      280      285
Gln Pro Glu Asn Ile Ser Asn Pro Leu Tyr Glu Ser Thr Thr Ser Ala
      290      295      300
Pro Pro Glu Pro Ser Tyr Asp Pro Phe Thr Asp Ser Glu Glu Arg Gln
      305      310      315      320
Leu Glu Gly Asn Asp Pro Leu Arg Thr Leu
      325      330

```

<210> 3857

<211> 797

<212> DNA

<213> Homo sapiens

<400> 3857

```

nngcgcgccca ccacgagaaac agcntccggg gcgcgggtcgt gggcgtgggc gacgagagcc
  60
gcgccttgcc cgacgtcatg cagggcatgg tgctcagctc catgcagcac ttcagcgagg
  120
ccttcaccca ggtcctgggc gagaagcata agcgcggcca cctggccgag gccgagggcc
  180
acagggacac ttgcgacgaa gactcggtag ccggcgagtc ggaccgcata gacgatggca
  240
ctgttaatgg ccgcggctgc tccccgggcg agtcggcctc ggggggctg tccaaaaagc
  300

```

tgctgctggg cagccccagc tcgctgagcc ccttctctaa gcgcatacaag ctcgagaagg
 360
 agttcgacct gcccccgcc gcgatgccca acacggagaa cgtgtactcg cagtggctcg
 420
 ccggctacgc ggccctccagg cagctcaaag atcccttcct tagcttcgga gactccagac
 480
 aatcgccctt tgccctcctcg tcggagcact cctcgagaa cgggagcttg cgcttctcca
 540
 caccgccccg ggagctggac ggagggatct cggggcgag cggcacggga agtggagggg
 600
 gcacgcccca tattagtggc ccggggcccg gcaggccag ctcaaaagag ggagacgca
 660
 gcgacacttg ttcttcacac acccccatc gccgtagtac ccagagagct caagatgtgt
 720
 ggcagttttc ggatggaagc tcgagagccc ttaagttctg agaaaatttg aagcccccg
 780
 ggggtggggtg gacgcgt
 797

<210> 3858

<211> 76

<212> PRT

<213> Homo sapiens

<400> 3858

Xaa Arg Ala Thr Thr Arg Thr Ala Ser Gly Ala Arg Ser Trp Ala Trp
 1 5 10 15
 Ala Thr Arg Ala Ala Pro Cys Pro Thr Ser Cys Arg Ala Trp Cys Ser
 20 25 30
 Ala Pro Cys Ser Thr Ser Ala Arg Pro Ser Thr Arg Ser Trp Ala Arg
 35 40 45
 Ser Ile Ser Ala Ala Thr Trp Pro Arg Pro Arg Ala Thr Gly Thr Leu
 50 55 60
 Ala Thr Lys Thr Arg Trp Pro Ala Ser Arg Thr Ala
 65 70 75

<210> 3859

<211> 1449

<212> DNA

<213> Homo sapiens

<400> 3859

tacaagaata aaaagcaagt ggggaagtat ttctggcctc ggattacaaa ggttcacttc
 60
 aaggagactc aatttgaact cagagtactg ggaaaagatt gtaacgaaac ctcattcttt
 120
 tttgaagctc ggagtaaaac tgcttgcaag cacctctgga agtgcagtgt ggaacatcat
 180
 acatttttta gaatgccaga aaatgaatcc aattcactgt caagaaaact cagcaagttt
 240
 ggatccatac gttataagca ccgtacagt gccaggacag ctttgcaaat gagccgagat
 300
 ctttctattc agcttccccg gcctgatcag aatgtgacaa gaagtcgaag caagacttac
 360

cctaagcgaa tagcacaaac acagccagct gaatcaaaca ccatcagtag gataactgca
 420
 aacatggaaa atggagaaaa tgaaggaaca attaaaatta ttgcaccttc accagtaaaa
 480
 agctttaaga aagcaaagaa tgaatatagc cctgataccc aaagaagcaa atctcatgca
 540
 ccgtgggaag aaaatggccc ccagagtgga ctctacaatt ctcccagtga tcgcactaag
 600
 tcgccaagt tcccttacac gcgtcgccga aacccctcct gtggaagtga caatgattct
 660
 gtacagcctg tgaggaggag gaaagcccat aacagtgggtg aagattcaga tcttaagcaa
 720
 agggaggagt cacgttcacg ctgtaacacc agcagtggta gtgaatcaga aaattctaata
 780
 agagaacacc ggaaaaagag aaacagaata cggcaggaga atgatatggt tgattcagcg
 840
 cctcagtggg aagctgtatt aaggagacaa aaggaaaaaa accaagccga cccaacaac
 900
 aggcgatcca gacacagatc tcgttcgaga agccccgata tccaagcaaa agaagagtta
 960
 tggaagcaca ttcaaaaaga acttgtggat ccattccggat tgtccgaaga acaattaaaa
 1020
 gagattccat acactaaaat agagtgagtg cctttcagaa tcttctcacc aaagctttat
 1080
 tagtgcttga cacaagggtga cccaatccgc atcaggcatt ctcatcgcg acgaagttac
 1140
 cgccagtatc gcagggtccca gtgttcagat ggggagcgat cagttctctc ggaagtgaat
 1200
 tcaaaaacag atcttgtacc accacttccg gtgaccatt ctccggatgc tcagggttct
 1260
 ggggatgcta cagttcatca gagaagaaat ggggtctaaag atagcctgat ggaagaaaaa
 1320
 cctcagacat ctacaaacaa cctggctgga aaacacacag caaaaacaat aaaaactata
 1380
 caagcttccc gcctcaagac agagacttga tcttgatgaa ggggtcaagg taggggtggg
 1440
 aaggttgtg
 1449

<210> 3860

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3860

Tyr	Lys	Asn	Lys	Lys	Gln	Val	Gly	Lys	Tyr	Phe	Trp	Pro	Arg	Ile	Thr
1				5				10						15	
Lys	Val	His	Phe	Lys	Glu	Thr	Gln	Phe	Glu	Leu	Arg	Val	Leu	Gly	Lys
				20				25					30		
Asp	Cys	Asn	Glu	Thr	Ser	Phe	Phe	Glu	Ala	Arg	Ser	Lys	Thr	Ala	
		35				40				45					
Cys	Lys	His	Leu	Trp	Lys	Cys	Ser	Val	Glu	His	His	Thr	Phe	Phe	Arg
	50				55				60						
Met	Pro	Glu	Asn	Glu	Ser	Asn	Ser	Leu	Ser	Arg	Lys	Leu	Ser	Lys	Phe

65		70		75		80
Gly Ser Ile Arg Tyr Lys His Arg Tyr Ser Gly Arg Thr Ala Leu Gln						
	85			90		95
Met Ser Arg Asp Leu Ser Ile Gln Leu Pro Arg Pro Asp Gln Asn Val						
	100			105		110
Thr Arg Ser Arg Ser Lys Thr Tyr Pro Lys Arg Ile Ala Gln Thr Gln						
	115			120		125
Pro Ala Glu Ser Asn Thr Ile Ser Arg Ile Thr Ala Asn Met Glu Asn						
	130			135		140
Gly Glu Asn Glu Gly Thr Ile Lys Ile Ile Ala Pro Ser Pro Val Lys						
	145			150		155
Ser Phe Lys Lys Ala Lys Asn Glu Asn Ser Pro Asp Thr Gln Arg Ser						
	165			170		175
Lys Ser His Ala Pro Trp Glu Glu Asn Gly Pro Gln Ser Gly Leu Tyr						
	180			185		190
Asn Ser Pro Ser Asp Arg Thr Lys Ser Pro Lys Phe Pro Tyr Thr Arg						
	195			200		205
Arg Arg Asn Pro Ser Cys Gly Ser Asp Asn Asp Ser Val Gln Pro Val						
	210			215		220
Arg Arg Arg Lys Ala His Asn Ser Gly Glu Asp Ser Asp Leu Lys Gln						
	225			230		235
Arg Arg Arg Ser Arg Ser Arg Cys Asn Thr Ser Ser Gly Ser Glu Ser						
	245			250		255
Glu Asn Ser Asn Arg Glu His Arg Lys Lys Arg Asn Arg Ile Arg Gln						
	260			265		270
Glu Asn Asp Met Val Asp Ser Ala Pro Gln Trp Glu Ala Val Leu Arg						
	275			280		285
Arg Gln Lys Glu Lys Asn Gln Ala Asp Pro Asn Asn Arg Arg Ser Arg						
	290			295		300
His Arg Ser Arg Ser Arg Ser Pro Asp Ile Gln Ala Lys Glu Glu Leu						
	305			310		315
Trp Lys His Ile Gln Lys Glu Leu Val Asp Pro Ser Gly Leu Ser Glu						
	325			330		335
Glu Gln Leu Lys Glu Ile Pro Tyr Thr Lys Ile Glu						
	340			345		

<210> 3861

<211> 748

<212> DNA

<213> Homo sapiens

<400> 3861

nagattggag tccggccgcc ccccgacagc agccgcctcc tgccttcctc gctgctaggc

60

gccacatgt cgggagacaa acttctgagc gaactcgggtt ataagctggg ccgcacaatt

120

ggagagggca gctactccaa ggtgaaggtg gccacatcca agaagtacaa gggtagcgtg

180

gccatcaagg tgggtggaccg gggcgagcg ccccggaact tcgtcaacaa gttcctgccg

240

cgagagctgt ccatcctgcg gggcgtgcga caccgcaca tcgtgcacgt cttcgagttc

300

atcgaggtgt gcaacgggaa actgtacatc gtgatggaag cggccgccac cgacctgctg

360

caagccgtgc agcgcaacgg gcgcaccccc ggagttcagg cgcgcgacct ctttgcgag
 420
 atcgccggcg ccgtgcgcta cctgcacgat catcacctgg tgcaccgga cctcaagtgc
 480
 gaaaacgtgc tgctgagccc ggacgagcgc cgcgtaagc tcaccgactt cggcttcggc
 540
 cgccaggccc atggctaccc agacctgagc accacctact gcggctcagc cgtacgcgtc
 600
 acccgagtca tgcattttctt gagcacctac tgtctgccag gccccagagc tcatggcgaa
 660
 gagacttggg cccatccctg ccgaaaacga gacaattgaa aagtcaagta aaataaaaga
 720
 atgacatgga aataaaaaaa aaaaaaaa
 748

<210> 3862
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 3862
 Met Ser Gly Asp Lys Leu Leu Ser Glu Leu Gly Tyr Lys Leu Gly Arg
 1 5 10 15
 Thr Ile Gly Glu Gly Ser Tyr Ser Lys Val Lys Val Ala Thr Ser Lys
 20 25 30
 Lys Tyr Lys Gly Thr Val Ala Ile Lys Val Val Asp Arg Arg Arg Ala
 35 40 45
 Pro Pro Asp Phe Val Asn Lys Phe Leu Pro Arg Glu Leu Ser Ile Leu
 50 55 60
 Arg Gly Val Arg His Pro His Ile Val His Val Phe Glu Phe Ile Glu
 65 70 75 80
 Val Cys Asn Gly Lys Leu Tyr Ile Val Met Glu Ala Ala Ala Thr Asp
 85 90 95
 Leu Leu Gln Ala Val Gln Arg Asn Gly Arg Ile Pro Gly Val Gln Ala
 100 105 110
 Arg Asp Leu Phe Ala Gln Ile Ala Gly Ala Val Arg Tyr Leu His Asp
 115 120 125
 His His Leu Val His Arg Asp Leu Lys Cys Glu Asn Val Leu Leu Ser
 130 135 140
 Pro Asp Glu Arg Arg Val Lys Leu Thr Asp Phe Gly Phe Gly Arg Gln
 145 150 155 160
 Ala His Gly Tyr Pro Asp Leu Ser Thr Thr Tyr Cys Gly Ser Ala Val
 165 170 175
 Arg Val Thr Arg Val Met His Phe Leu Ser Thr Tyr Cys Leu Pro Gly
 180 185 190
 Pro Arg Ala His Gly Glu Glu Thr Trp Ala His Pro Cys Arg Lys Arg
 195 200 205
 Asp Asn
 210

<210> 3863
 <211> 341
 <212> DNA
 <213> Homo sapiens

<400> 3863

acgcgtgaag ggggatccag atgctgataa cgaaggccca tcagcaggaa ctctcacag
 60
 ctccacttga ggcttcctat tttctttaat cctgggggtac agctcccacc tggacacttc
 120
 agttttgctc tcagttggga ctctgggaaa aaaactgtgt ggctgatctc cagcaggttc
 180
 ttctggtcga ggctccccga gaaccatctg gccatgggct ggcagccgag ttctcgagc
 240
 gtccaggctg acgggtacatt ccaggctagc catcctatca taatcgaatc tgagtagatt
 300
 tttatcaatc gcttgggaca agccattgaa ttttcggaga g
 341

<210> 3864

<211> 108

<212> PRT

<213> Homo sapiens

<400> 3864

Met	Ala	Cys	Pro	Lys	Arg	Leu	Ile	Lys	Ile	Tyr	Ser	Asp	Ser	Ile	Met
1				5				10						15	
Ile	Gly	Trp	Leu	Ala	Trp	Asn	Val	Pro	Ser	Ala	Trp	Thr	Leu	Arg	Glu
			20					25					30		
Leu	Gly	Cys	Gln	Pro	Met	Ala	Arg	Trp	Phe	Ser	Gly	Ser	Leu	Asp	Gln
		35				40					45				
Lys	Asn	Leu	Val	Glu	Ile	Ser	His	Thr	Val	Phe	Phe	Pro	Glu	Ser	Gln
	50					55				60					
Leu	Arg	Ala	Lys	Leu	Lys	Cys	Pro	Gly	Gly	Ser	Cys	Thr	Pro	Gly	Leu
65				70				75					80		
Lys	Lys	Ile	Gly	Ser	Leu	Lys	Val	Ser	Cys	Glu	Glu	Phe	Leu	Leu	Met
			85					90					95		
Gly	Leu	Arg	Tyr	Gln	His	Leu	Asp	Pro	Pro	Ser	Arg				
			100					105							

<210> 3865

<211> 492

<212> DNA

<213> Homo sapiens

<400> 3865

nattgcaaaa caatatatga cacgtctttt accagccaca accttcaaca aaccaatatt
 60
 aatcaggaat tgacgataag cttactacat tttgaaatta tctgactttc ctcatgaaat
 120
 gagacctatg tgaagcccac ttaattttct gaaacttcac atcatgtacc ttcattgtaa
 180
 tattctgaca cttgtttcat gcagccatac cagtcacaac tttaaatttt tagtcagact
 240
 ttgctcacia gggttcagga taattaatac aaatgggttg ggccagccat cacacagcag
 300
 tctcctatct acttcactac aactacagct ttcattcttc attacattac tttttctgag
 360

tagtctgggt caaatagtagt aaactgaata ttccttaacc aaaatgcttg gaagtaggcc
 420
 gggagcagcg gctcaccctt gtaatcccag cattttggga ggccaaagca gacagatcac
 480
 tcaaggtcag ca
 492

<210> 3866
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 3866
 Met Tyr Leu His Cys Asn Ile Leu Thr Leu Val Ser Cys Ser His Thr
 1 5 10 15
 Ser His Asn Phe Lys Phe Leu Val Arg Leu Cys Ser Gln Gly Phe Arg
 20 25 30
 Ile Ile Asn Thr Asn Gly Leu Gly Gln Pro Ser His Ser Ser Leu Leu
 35 40 45
 Phe Thr Ser Leu Gln Leu Gln Leu Ser Phe Phe Ile Thr Leu Leu Phe
 50 55 60
 Leu Ser Ser Leu Gly Gln Ile Val Gln Thr Glu Tyr Ser Leu Thr Lys
 65 70 75 80
 Met Leu Gly Ser Arg Pro Gly Ala Ala Ala His Pro Cys Asn Pro Ser
 85 90 95
 Ile Leu Gly Gly Gln Ser Arg Gln Ile Thr Gln Gly Gln
 100 105

<210> 3867
 <211> 1032
 <212> DNA
 <213> Homo sapiens

<400> 3867
 acgcgtgaag gggagctccg gaagaatctg gaggagctat tccaggtgaa gatggaacgg
 60
 gaggcagcatc agactgagat cagggatctc caggaccagc tctcagaaat gcacgatgaa
 120
 ctggacagtg caaagcgatc ggaggacagg gagaaggagg ctctgattga ggagctctta
 180
 caggcaaaac aggatcttca agatctgctg attgccaaag aggagcaaga agacctcttg
 240
 agaaagcgag agcgtgaact caccgccctg aaggagagccc tgaaagaaga ggtttccagc
 300
 catgatcagg agatggacaa gctgaaggag caatatgatg ctgagttgca ggccctgagg
 360
 gagagtgtgg aagaagcaac caagaatgtc gaggtcttgg cgagcaggag caacacttca
 420
 gagcaagacc aggcggggac tgaaatgcgc gtgaagcttc tgcaggagga gaatgagaag
 480
 ctgcagggaa gaagcgaaga gctggagcgg agagttgctc agcttcaaag gcagatcgag
 540
 gacctgaaag gcgatgaagc caaggcgaag gaaacgctga agaagtacga gggagaaata
 600

cgacagttag aggaggccct tgtgcacgcc agaaaggaag aaaaagaagc tgtgtcagcc
 660
 agaagggccc tggagaatga actggaggct gctcagggaa atctgagtca gactaccag
 720
 gagcagaagc agttgtctga gaagctcaaa gaggagagtg agcagaagga gcagctaaga
 780
 aggttgaaga acgagatgga gaatgagcgg tggcacctgg gcaaaacat tgagaaactg
 840
 cagaaggaga tggcagacat tgttgaggcc tcccgtacct caaccctgga gctccagaac
 900
 cagctggatg agtataagga gaaaaaccgc agggagctcg cagaaatgca aagacagttg
 960
 aaggagaaaa cgctggaggc agaaaagtcc cgactgacag ccatgaaaat gcaggatgag
 1020
 atgcgtctga tg
 1032

<210> 3868
 <211> 344
 <212> PRT
 <213> Homo sapiens

<400> 3868
 Thr Arg Glu Gly Glu Leu Arg Lys Asn Leu Glu Glu Leu Phe Gln Val
 1 5 10 15
 Lys Met Glu Arg Glu Gln His Gln Thr Glu Ile Arg Asp Leu Gln Asp
 20 25 30
 Gln Leu Ser Glu Met His Asp Glu Leu Asp Ser Ala Lys Arg Ser Glu
 35 40 45
 Asp Arg Glu Lys Gly Ala Leu Ile Glu Glu Leu Leu Gln Ala Lys Gln
 50 55 60
 Asp Leu Gln Asp Leu Leu Ile Ala Lys Glu Glu Gln Glu Asp Leu Leu
 65 70 75 80
 Arg Lys Arg Glu Arg Glu Leu Thr Ala Leu Lys Gly Ala Leu Lys Glu
 85 90 95
 Glu Val Ser Ser His Asp Gln Glu Met Asp Lys Leu Lys Glu Gln Tyr
 100 105 110
 Asp Ala Glu Leu Gln Ala Leu Arg Glu Ser Val Glu Glu Ala Thr Lys
 115 120 125
 Asn Val Glu Val Leu Ala Ser Arg Ser Asn Thr Ser Glu Gln Asp Gln
 130 135 140
 Ala Gly Thr Glu Met Arg Val Lys Leu Leu Gln Glu Glu Asn Glu Lys
 145 150 155 160
 Leu Gln Gly Arg Ser Glu Glu Leu Glu Arg Arg Val Ala Gln Leu Gln
 165 170 175
 Arg Gln Ile Glu Asp Leu Lys Gly Asp Glu Ala Lys Ala Lys Glu Thr
 180 185 190
 Leu Lys Lys Tyr Glu Gly Glu Ile Arg Gln Leu Glu Glu Ala Leu Val
 195 200 205
 His Ala Arg Lys Glu Glu Lys Glu Ala Val Ser Ala Arg Arg Ala Leu
 210 215 220
 Glu Asn Glu Leu Glu Ala Ala Gln Gly Asn Leu Ser Gln Thr Thr Gln
 225 230 235 240
 Glu Gln Lys Gln Leu Ser Glu Lys Leu Lys Glu Glu Ser Glu Gln Lys

[illegible]

```
<210> 3869
<211> 1226
<212> DNA
<213> Homo sapiens
```

```

<400> 3869
tttttttttg ctttggttat tttttttgtc ttcttttctt tttttaagat caatatcat
60
tcttcatttg ccctcgtaac gaaaatatagat ttttaaattgc ctcaaata caaacatcat
120
tgatgcacac acattccaga aatgcagagg tatgctgctg ccacggggta ggggtgcggg
180
aggcggcctg gcctcatggc cgcagaccgt gccccagccc gggcctggca ggtagctggc
240
cactgataaa tgccactggg atcctaggag aagctgggga ccatgcgtga ggtactgaag
300
gggaccatgg tggatggcat cctgggcact ttgtagcttg tctgagggaa aggcctctgc
360
tgccatagaa aagctggaca catgtcacc tggggccctg acatcctaaa atgccccact
420
gactaccagt cactaggaga aaggctctcg gctatgccct tcccagtgat gcttgcccca
480
gagtgactgg tcacagggtg gggacaggtt tgctccagaa accgtaggcc tttcttgtct
540
ggccccctaa agaggacca agatcaggaa aactccccag tttaaaaaa tatctgtcca
600
tctgtatata aaatacctat tattagctgg agttgcacac atgcaggacc aggagagact
660
gcctgaggtt ctgcctggac cgaaggaggc ctcgctcaca gcacctctgt gaggggactg
720
gtgctcctgg gaagtcactt ctcttggtga ccgagctgac accccctcca cttggaaagc
780
acagggactg agcaggcggg acctgtgctg gagggagacc ctctggtga ggaactatgc
840
gggccttctg ggccctcagca gctccagccc actcctggcc tggcaggcca cctgccacc
900
caccaccca tctgcctctg gccccagtg aagtcagaag aggcaggagc ccgcaggct
960
gtgagcctgg cgcaggctcg ctgacagcga gcttctcacc tgccctgggtg tagagcggac
1020

```

gctctcggca gcctgcacgg cccgggtcag ggccttggtg agtcctcta ggtcgcccag
1080
gtcgagctgg atggagtgcc ggtgtctccg ggctgggtgg ggagaggctg tgggcggcca
1140
cttgccagct ggttgggtg aggtaggtcc tgcaggcgca tagtacacag cggcagggtg
1200
ataaggcatg atgggaaccg aggaga
1226

<210> 3870

<211> 100

<212> PRT

<213> Homo sapiens

<400> 3870

Met	Ala	Ala	Glu	Ala	Phe	Pro	Ser	Asp	Lys	Leu	Gln	Ser	Ala	Gln	Asp
1			5						10					15	
Ala	Ile	His	His	Gly	Pro	Leu	Gln	Tyr	Leu	Thr	His	Gly	Pro	Gln	Leu
			20					25					30		
Leu	Leu	Gly	Ser	Gln	Trp	His	Leu	Ser	Val	Ala	Ser	Tyr	Leu	Pro	Gly
		35				40					45				
Pro	Gly	Trp	Gly	Thr	Val	Cys	Gly	His	Glu	Ala	Arg	Pro	Pro	Pro	Ala
	50					55					60				
Pro	Leu	Pro	Arg	Gly	Ser	Ser	Ile	Pro	Leu	His	Phe	Trp	Asn	Val	Cys
65					70					75				80	
Ala	Ser	Met	Met	Phe	Val	Tyr	Leu	Arg	His	Leu	Lys	Ile	Tyr	Phe	Arg
			85						90					95	
Tyr	Glu	Gly	Lys												
			100												

<210> 3871

<211> 473

<212> DNA

<213> Homo sapiens

<400> 3871

nggatcctta tggagtaact tctgtgggac atcctgcac ccttccaagc ttgggtgaga
60
tgcctcacat ttcccagtgc ttcctctgca cccctccatt ggagtaaaaa ccacagtttg
120
tgggatggtt gagttgacag ctctgaatcc cagaaacctt aattttggct tatcttttga
180
taggctgagg gaaaatacaa agatgatcct gttgatctcc gccttgatat tgaacgtcgt
240
aaaaaacata aggagagaga tcttaaacga ggtaaatcga gagaatcagt ggattcccga
300
gactccagtc actcaaggga aaggtcagct gaaaaaacag agaaaactca taaaggatca
360
aagaaacaga agaaagacct ctgagagccg agacaagctg ggagcgaaag gagattttcc
420
cacaggaaag tcttctttt ccattactcg agaggcacag gtcaatgtcc gga
473

<210> 3872

<211> 66
 <212> PRT
 <213> Homo sapiens

<400> 3872
 Ala Glu Gly Lys Tyr Lys Asp Asp Pro Val Asp Leu Arg Leu Asp Ile
 1 5 10 15
 Glu Arg Arg Lys Lys His Lys Glu Arg Asp Leu Lys Arg Gly Lys Ser
 20 25 30
 Arg Glu Ser Val Asp Ser Arg Asp Ser Ser His Ser Arg Glu Arg Ser
 35 40 45
 Ala Glu Lys Thr Glu Lys Thr His Lys Gly Ser Lys Lys Gln Lys Lys
 50 55 60
 Asp Leu
 65

<210> 3873
 <211> 869
 <212> DNA
 <213> Homo sapiens

<400> 3873
 gacattgctg cagaacggag cgccaccga gatccagaac agactgaagg agatcccctc
 60
 aagtgtgcat taaactcaaa gattctgtct gtaatggaag cctatcacct gtccttcgag
 120
 aggaggcaga agtcgtccga ggcccctgtg cagtccccgc agcgctccgt ggactccatc
 180
 agccaagagt cctccacttc cagcttctcc tccatgtcag ccggctcaag gcaggaggag
 240
 accaagaagg actacagaga ggtagaaaaa cttttgagag cagttgctga tggagatcta
 300
 gaaatggtgc gttacctgtt ggaatggaca gaggaggacc tggaggatgc ggaggacact
 360
 gtcagtgcag cggacccccg attctgtcac ccgttgtgcc agtgccccaa gtgtgcccc
 420
 gtcagaaga ggctggcgaa ggttcctgcc agtgggcttg gtgtgaacgt gaccagccag
 480
 gacggctcct ccccgctgca tgtcgccgcc ctgcacggcc gggcggacct catccgctc
 540
 ctgctgaagc acggggccaa cgcaggtgcc aggaacgcag accaagccgt cccgctccac
 600
 ctggcctgcc agcagggcca ctttcagggtg gtgaagtgtc tgtagattc gaatgcaaaa
 660
 cccaataaga aggacctcag tggaaacacg cccctcattt acgcctgtct cggtgccat
 720
 cacgagcttg tggcactgct gctacagcac ggggcctcca ttaacgtctt aacaataagg
 780
 ggcaacacag cgtgcacga ggctgtgatt gaaaagcacg tcttcgtggt agagctgctt
 840
 ctgctccacg gagcgtcagt taggtgctg
 869

<210> 3874

<211> 289
 <212> PRT
 <213> Homo sapiens

<400> 3874
 Asp Ile Ala Ala Glu Arg Ser Val His Arg Asp Pro Glu Gln Thr Glu
 1 5 10 15
 Gly Asp Pro Leu Lys Cys Ala Leu Asn Ser Lys Ile Leu Ser Val Met
 20 25 30
 Glu Ala Tyr His Leu Ser Phe Glu Arg Arg Gln Lys Ser Ser Glu Ala
 35 40 45
 Pro Val Gln Ser Pro Gln Arg Ser Val Asp Ser Ile Ser Gln Glu Ser
 50 55 60
 Ser Thr Ser Ser Phe Ser Ser Met Ser Ala Gly Ser Arg Gln Glu Glu
 65 70 75 80
 Thr Lys Lys Asp Tyr Arg Glu Val Glu Lys Leu Leu Arg Ala Val Ala
 85 90 95
 Asp Gly Asp Leu Glu Met Val Arg Tyr Leu Leu Glu Trp Thr Glu Glu
 100 105 110
 Asp Leu Glu Asp Ala Glu Asp Thr Val Ser Ala Ala Asp Pro Glu Phe
 115 120 125
 Cys His Pro Leu Cys Gln Cys Pro Lys Cys Ala Pro Ala Gln Lys Arg
 130 135 140
 Leu Ala Lys Val Pro Ala Ser Gly Leu Gly Val Asn Val Thr Ser Gln
 145 150 155 160
 Asp Gly Ser Ser Pro Leu His Val Ala Ala Leu His Gly Arg Ala Asp
 165 170 175
 Leu Ile Arg Leu Leu Leu Lys His Gly Ala Asn Ala Gly Ala Arg Asn
 180 185 190
 Ala Asp Gln Ala Val Pro Leu His Leu Ala Cys Gln Gln Gly His Phe
 195 200 205
 Gln Val Val Lys Cys Leu Leu Asp Ser Asn Ala Lys Pro Asn Lys Lys
 210 215 220
 Asp Leu Ser Gly Asn Thr Pro Leu Ile Tyr Ala Cys Ser Gly Gly His
 225 230 235 240Glu Leu
 Val Ala Leu Leu Leu Gln His Gly Ala Ser Ile Asn Ala
 245 250 255
 Leu Thr Ile Arg Gly Asn Thr Ala Leu His Glu Ala Val Ile Glu Lys
 260 265 270
 His Val Phe Val Val Glu Leu Leu Leu Leu His Gly Ala Ser Val Arg
 275 280 285
 Cys

<210> 3875
 <211> 2640
 <212> DNA
 <213> Homo sapiens

<400> 3875
 atggcgccgg cagttgtggt ggcggagggg gacagcgact cccggcccgg acaggagtgtg
 60
 ttagtggcct ggaacaccgt gagcaccggc ctggtgccgc cggctgcgct ggggctggtg
 120

tcttcccga ccagcgggtgc agtcccgcga aaggaagagg agctccgggc ggcgggtggag
180
gttctgaggg gccacgggct acactcggtc ctggaggagt gggtcgtgga ggtgctgcag
240
aacgatctgc aggccaacat ctcccctgag ttctggaatg ccatctccca atgcgagaac
300
tctgcggatg agccccagtg ccttttgcta ctccctgacg cttttggcct gctggagagc
360
cgcttgatc cctacctgcg tagcctagag ctgctggaga aatggactcg cctgggcttg
420
ctgatgggca ctggtgctca ggggctgcga gaagaagtcc acactatggt gcgcggagtc
480
ttgttcttta gcacccccag aaccttcaa gagatgatcc agcgtctgta tgggtgcttc
540
ttgagagtct atatgcagag taagaggaag ggggaagggg gcacagacc ggaactggaa
600
ggggagctgg acagccggtg tgcccgctgc cggtactacc ggctcctgca gagcccgctg
660
tgtgcagggt gcagcagtga caagcaacag tgctgggtgc gccaggctct ggagcagttc
720
catcagctca gccaggctct acacaggctc agtctgctgg agcgggtcag tgccgaggct
780
gtgaccacca cctgcacca ggtgaccggt gagaggatgg aggaccgttg cgggggcgag
840
tacgagcgt ccttctgctg tgagttccac aggtggatcg agcgggtggg cggctggctc
900
ggcaaggtgt tcctgcagga cggccccgcc aggcccgcat ctcccgaggc cggcaacacc
960
ctgcgcgct ggcgctgcca cgtgcaaagg ttcttctacc gcatctacgc cagcctgcgc
1020
atcgaggagc tcttcagcat cgtccgagac ttcccagact cccggccagc catcgaggac
1080
ctcaagtact gcctggagag gacggaccag aggcagcagc tgctcgtgct cctcaaggct
1140
gccctggaga ctcggtcctt gcatccaggc gtcaaacagt gtgacatcat caccctctat
1200
atctctgcca tcaaggcgt gcgctgctg gaccttcca tggatcatcct ggaggtggcc
1260
tgtgagccta tccgccccta cctgaggacg cgggaggaca cagtgcggca gattgtggct
1320
gggctgacgg gggactcgga cgggacaggg gacctggctg ttgagctgct caagaccgac
1380
ccggcgagcc tggagacagg ccaggacagt gaggatgact caggcgagcc agaggactgg
1440
gtcccggacc ctgtggatgc cgatccaggg aagtcgagct ccaagcggcg ttcacggac
1500
atcatcagcc tgctggctcag catctacggc agcaaggacc tcttcatcaa tgagtaccgc
1560
tcgtgctgg ccgaccgct gctgcaccag ttcagcttca gcccagagcg ggagatccgc
1620
aacgtggagc tgctgaagct gcgtttggc gaggcccaa tgcacttctg tgaagtcag
1680
ctgaaggaca tggcggactc ccgcccgcac aatgccaaca tccgggagga ggatgagaag
1740

cggnnccagc agaggagcag ccaccgttcg gggctctacgc tgcctcctg tccagtgagt
 1800
 tctggccgcc cttcaaggac gnagaagctg gaggtccccg aggatatcag ggcagccctg
 1860
 gaggttact gcaagaagta tgagcagctc aaggccatgc ggaccctcag ttggaagcac
 1920
 accctgggcc tggtgaccat ggacgtggag ctggccgacc gcacgctgtc tgtggcggtc
 1980
 accccagtac aggcggtgat cttgctgtat ttccaggacc aagccagctg gaccctggag
 2040
 gaactgagca aggcggtgaa aatgcccgtg gcgctgctgc ggcggcggat gtcctgtgtg
 2100
 ctgcagcagg gtgtgctgcg tgagnngagc cccccggcac cttctctgtc attgaggagg
 2160
 agcggcctca ggaccgggna caacatggtg ctcatcgaca gtgacgacga gagcgactcc
 2220
 ggcattggcct ccagggccga ccagaaggag gagagctgc tgcctctctg gacgtacatc
 2280
 caggccatgc tgaccaacct ggagagcctc tccctggatc gtatctacaa catgctccgc
 2340
 atgtttgtgg tgactgggcc tgcactggcc gagattgacc tgcaggagct gcagggtac
 2400
 ctgcagaaga aggtgcggga ccagcagctc gtctactcgg ccggcgtcta ccgctgccc
 2460
 aagaactgca gctgacacat cgcgcgcgcg ccgcgcgcgc cgcaggcgc tgcctgcag
 2520
 gtgctctcgt cctcccgctg cagccccgcg ccgcgcgtgt ccagaatgc actgctgagg
 2580
 agcatgccca cccccacccc cgcagtgtgc agattaaagc aagtcagatc atcaaaaaaa
 2640

<210> 3876

<211> 824

<212> PRT

<213> Homo sapiens

<400> 3876

Met	Ala	Ala	Ala	Val	Val	Val	Ala	Glu	Gly	Asp	Ser	Asp	Ser	Arg	Pro
1				5				10						15	
Gly	Gln	Glu	Leu	Leu	Val	Ala	Trp	Asn	Thr	Val	Ser	Thr	Gly	Leu	Val
			20					25					30		
Pro	Pro	Ala	Ala	Leu	Gly	Leu	Val	Ser	Ser	Arg	Thr	Ser	Gly	Ala	Val
			35				40					45			
Pro	Pro	Lys	Glu	Glu	Glu	Leu	Arg	Ala	Ala	Val	Glu	Val	Leu	Arg	Gly
			50			55				60					
His	Gly	Leu	His	Ser	Val	Leu	Glu	Glu	Trp	Phe	Val	Glu	Val	Leu	Gln
65					70				75					80	
Asn	Asp	Leu	Gln	Ala	Asn	Ile	Ser	Pro	Glu	Phe	Trp	Asn	Ala	Ile	Ser
			85					90						95	
Gln	Cys	Glu	Asn	Ser	Ala	Asp	Glu	Pro	Gln	Cys	Leu	Leu	Leu	Leu	Leu
			100					105						110	
Asp	Ala	Phe	Gly	Leu	Leu	Glu	Ser	Arg	Leu	Asp	Pro	Tyr	Leu	Arg	Ser
			115					120				125			
Leu	Glu	Leu	Leu	Glu	Lys	Trp	Thr	Arg	Leu	Gly	Leu	Leu	Met	Gly	Thr

130	135	140
Gly Ala Gln Gly Leu Arg Glu Glu Val His Thr Met Leu Arg Gly Val		
145	150	155
Leu Phe Phe Ser Thr Pro Arg Thr Phe Gln Glu Met Ile Gln Arg Leu		160
	165	170
Tyr Gly Cys Phe Leu Arg Val Tyr Met Gln Ser Lys Arg Lys Gly Glu		175
	180	185
Gly Gly Thr Asp Pro Glu Leu Glu Gly Glu Leu Asp Ser Arg Tyr Ala		190
	195	200
Arg Arg Arg Tyr Tyr Arg Leu Leu Gln Ser Pro Leu Cys Ala Gly Cys		205
	210	215
Ser Ser Asp Lys Gln Gln Cys Trp Cys Arg Gln Ala Leu Glu Gln Phe		220
225	230	235
His Gln Leu Ser Gln Val Leu His Arg Leu Ser Leu Leu Glu Arg Val		240
	245	250
Ser Ala Glu Ala Val Thr Thr Thr Leu His Gln Val Thr Arg Glu Arg		255
	260	265
Met Glu Asp Arg Cys Arg Gly Glu Tyr Glu Arg Ser Phe Leu Arg Glu		270
	275	280
Phe His Arg Trp Ile Glu Arg Val Val Gly Trp Leu Gly Lys Val Phe		285
	290	295
Leu Gln Asp Gly Pro Ala Arg Pro Ala Ser Pro Glu Ala Gly Asn Thr		300
305	310	315
Leu Arg Arg Trp Arg Cys His Val Gln Arg Phe Phe Tyr Arg Ile Tyr		320
	325	330
Ala Ser Leu Arg Ile Glu Glu Leu Phe Ser Ile Val Arg Asp Phe Pro		335
	340	345
Asp Ser Arg Pro Ala Ile Glu Asp Leu Lys Tyr Cys Leu Glu Arg Thr		350
	355	360
Asp Gln Arg Gln Gln Leu Leu Val Ser Leu Lys Ala Ala Leu Glu Thr		365
	370	375
Arg Leu Leu His Pro Gly Val Asn Thr Cys Asp Ile Ile Thr Leu Tyr		380
385	390	395
Ile Ser Ala Ile Lys Ala Leu Arg Val Leu Asp Pro Ser Met Val Ile		400
	405	410
Leu Glu Val Ala Cys Glu Pro Ile Arg Arg Tyr Leu Arg Thr Arg Glu		415
	420	425
Asp Thr Val Arg Gln Ile Val Ala Gly Leu Thr Gly Asp Ser Asp Gly		430
	435	440
Thr Gly Asp Leu Ala Val Glu Leu Ser Lys Thr Asp Pro Ala Ser Leu		445
	450	455
Glu Thr Gly Gln Asp Ser Glu Asp Asp Ser Gly Glu Pro Glu Asp Trp		460
465	470	475
Val Pro Asp Pro Val Asp Ala Asp Pro Gly Lys Ser Ser Ser Lys Arg		480
	485	490
Arg Ser Ser Asp Ile Ile Ser Leu Leu Val Ser Ile Tyr Gly Ser Lys		495
	500	505
Asp Leu Phe Ile Asn Glu Tyr Arg Ser Leu Leu Ala Asp Arg Leu Leu		510
	515	520
His Gln Phe Ser Phe Ser Pro Glu Arg Glu Ile Arg Asn Val Glu Leu		525
	530	535
Leu Lys Leu Arg Phe Gly Glu Ala Pro Met His Phe Cys Glu Val Met		540
545	550	555
Leu Lys Asp Met Ala Asp Ser Arg Arg Ile Asn Ala Asn Ile Arg Glu		560

565 570 575
 Glu Asp Glu Lys Arg Xaa Gln Gln Arg Ser Ser His Arg Ser Gly Ser
 580 585 590
 Thr Leu Ser Ser Cys Pro Val Ser Ser Gly Arg Pro Ser Arg Thr Xaa
 595 600 605
 Lys Leu Glu Val Pro Glu Asp Ile Arg Ala Ala Leu Glu Ala Tyr Cys
 610 615 620
 Lys Lys Tyr Glu Gln Leu Lys Ala Met Arg Thr Leu Ser Trp Lys His
 625 630 635 640
 Thr Leu Gly Leu Val Thr Met Asp Val Glu Leu Ala Asp Arg Thr Leu
 645 650 655
 Ser Val Ala Val Thr Pro Val Gln Ala Val Ile Leu Leu Tyr Phe Gln
 660 665 670
 Asp Gln Ala Ser Trp Thr Leu Glu Glu Leu Ser Lys Ala Val Lys Met
 675 680 685
 Pro Val Ala Leu Leu Arg Arg Arg Met Ser Val Trp Leu Gln Gln Gly
 690 695 700
 Val Leu Arg Glu Xaa Ser Pro Pro Ala Pro Ser Leu Ser Leu Arg Arg
 705 710 715 720
 Ser Gly Leu Arg Thr Gly Xaa Asn Met Val Leu Ile Asp Ser Asp Asp
 725 730 735
 Glu Ser Asp Ser Gly Met Ala Ser Gln Ala Asp Gln Lys Glu Glu Glu
 740 745 750
 Leu Leu Leu Phe Trp Thr Tyr Ile Gln Ala Met Leu Thr Asn Leu Glu
 755 760 765
 Ser Leu Ser Leu Asp Arg Ile Tyr Asn Met Leu Arg Met Phe Val Val
 770 775 780
 Thr Gly Pro Ala Leu Ala Glu Ile Asp Leu Gln Glu Leu Gln Gly Tyr
 785 790 795 800
 Leu Gln Lys Lys Val Arg Asp Gln Gln Leu Val Tyr Ser Ala Gly Val
 805 810 815
 Tyr Arg Leu Pro Lys Asn Cys Ser
 820

<210> 3877

<211> 1112

<212> DNA

<213> Homo sapiens

<400> 3877

nngaattcca tgaacatga ggatccagc atcatatcca tggaagatgg gtcccatat
 60
 gttaattggc cattaggtga agtgactcca tgccaacatg caaagaaggc gaatggcca
 120
 aactatattc agcctcaaaa aagacagacc acttttgaaa gccaggatcg caaggcagtg
 180
 tcccctagca gttctgaaaa gagaagtaag aatcctatct ctaggccatt agaaggtaag
 240
 aagtccttaa gtcttagtgc aaagactcac aacataggct ttgacaaaga cagctgccat
 300
 agtaccacaa agacagaagc ttcacaggaa gagcggctctg attcaagcgg cctcacatct
 360
 ctcaagaaat caccaaaggt ctcatccaag gacactcggg aaatcaaaac tgattttctca
 420

ctttctatta gtaattcgtc agatgtgagt gctaaagata agcatgctga agacaatgag
 480
 aagcgtttgg cagccttgga agcgaggcaa aaagcaaaag aagtgcagaa gaagctggtg
 540
 cataatgctc tggcaaattt ggatggtcac ccagaggata agccaacgca catcatcttc
 600
 ggttctgaca gtgaatgtga aacagaggag acatcgactc aggagcagag ccatccagga
 660
 gaggaatggg tgaaagagtc tatgggtaaa acatcagggg agctgtttga tagcagtgat
 720
 gatgaggaat ctgattctga agatgacagt aataggttca aaattaaacc tcagtttgag
 780
 ggcagagctg gacagaagct catggattta cagtcgcact ttggcaccga tgacagattc
 840
 cgcattggact ctcgatttct agaaactgac agtgaagagg aacaggaaga ggtaaatgaa
 900
 aagaaaactg ctgaggaaga agagcttgct gaagaaaaaa agaaagccct gaatgttgta
 960
 caaagtgttt tgcaaatcaa cttagcaat tctacaaaca gaggatcagt agctgctaag
 1020
 aaatttaagg acatcataca ttatgatcca acgaagcaag accatgccac ttacgaaaga
 1080
 aaaagagatg ataaacccaa agaaagtaaa gc
 1112

<210> 3878

<211> 370

<212> PRT

<213> Homo sapiens

<400> 3878

Xaa	Asn	Ser	Met	Lys	His	Glu	Asp	Pro	Ser	Ile	Ile	Ser	Met	Glu	Asp
1				5					10					15	
Gly	Ser	Pro	Tyr	Val	Asn	Gly	Ser	Leu	Gly	Glu	Val	Thr	Pro	Cys	Gln
				20				25					30		
His	Ala	Lys	Lys	Ala	Asn	Gly	Pro	Asn	Tyr	Ile	Gln	Pro	Gln	Lys	Arg
				35				40				45			
Gln	Thr	Thr	Phe	Glu	Ser	Gln	Asp	Arg	Lys	Ala	Val	Ser	Pro	Ser	Ser
				50			55				60				
Ser	Glu	Lys	Arg	Ser	Lys	Asn	Pro	Ile	Ser	Arg	Pro	Leu	Glu	Gly	Lys
				65		70			75					80	
Lys	Ser	Leu	Ser	Leu	Ser	Ala	Lys	Thr	His	Asn	Ile	Gly	Phe	Asp	Lys
				85				90						95	
Asp	Ser	Cys	His	Ser	Thr	Thr	Lys	Thr	Glu	Ala	Ser	Gln	Glu	Glu	Arg
				100				105					110		
Ser	Asp	Ser	Ser	Gly	Leu	Thr	Ser	Leu	Lys	Lys	Ser	Pro	Lys	Val	Ser
				115			120					125			
Ser	Lys	Asp	Thr	Arg	Glu	Ile	Lys	Thr	Asp	Phe	Ser	Leu	Ser	Ile	Ser
				130			135					140			
Asn	Ser	Ser	Asp	Val	Ser	Ala	Lys	Asp	Lys	His	Ala	Glu	Asp	Asn	Glu
				145		150			155					160	
Lys	Arg	Leu	Ala	Ala	Leu	Glu	Ala	Arg	Gln	Lys	Ala	Lys	Glu	Val	Gln
				165				170						175	
Lys	Lys	Leu	Val	His	Asn	Ala	Leu	Ala	Asn	Leu	Asp	Gly	His	Pro	Glu

	180		185		190
Asp Lys Pro Thr His Ile Ile Phe Gly Ser Asp Ser Glu Cys Glu Thr					
	195		200		205
Glu Glu Thr Ser Thr Gln Glu Gln Ser His Pro Gly Glu Glu Trp Val					
	210		215		220
Lys Glu Ser Met Gly Lys Thr Ser Gly Lys Leu Phe Asp Ser Ser Asp					
225		230		235	240
Asp Glu Glu Ser Asp Ser Glu Asp Asp Ser Asn Arg Phe Lys Ile Lys					
	245		250		255
Pro Gln Phe Glu Gly Arg Ala Gly Gln Lys Leu Met Asp Leu Gln Ser					
	260		265		270
His Phe Gly Thr Asp Asp Arg Phe Arg Met Asp Ser Arg Phe Leu Glu					
	275		280		285
Thr Asp Ser Glu Glu Glu Gln Glu Glu Val Asn Glu Lys Lys Thr Ala					
	290		295		300
Glu Glu Glu Glu Leu Ala Glu Glu Lys Lys Lys Ala Leu Asn Val Val					
305		310		315	320
Gln Ser Val Leu Gln Ile Asn Leu Ser Asn Ser Thr Asn Arg Gly Ser					
	325		330		335
Val Ala Ala Lys Lys Phe Lys Asp Ile Ile His Tyr Asp Pro Thr Lys					
	340		345		350
Gln Asp His Ala Thr Tyr Glu Arg Lys Arg Asp Asp Lys Pro Lys Glu					
	355		360		365
Ser Lys					
370					

<210> 3879

<211> 2769

<212> DNA

<213> Homo sapiens

<400> 3879

```

ntcatgacca cattcagtca gctccgagac ctccacctgg aggggaactt cctacaccgc
60
ctccccagcg aggtcagtgc cctgcagcac ctcaaggcca ttgacctgtc ccggaaccag
120
ttccaggact tccctgagca gcttaccgcc ctgccggcgc tggagaccat caacctggag
180
gagaacgaga tcgtagatgt gcccgtaggag aagctggccg ccatgccagc cttgcgcagc
240
atcaacctcc gcttcaaccc actcaacgcc gaggtgcgcg tgatcgcccc gccgctcatc
300
aagtttgaca tgctcatgtc tccggaaggc gcaagagccc ccctacctta ggccaccctc
360
ctcatgcccc ccagcaagg gacagaggcc acaggcctgg aacctggaa gggagggagg
420
cccatgggag gccaaacctg ggggctgggg gcgggtgggc caagcagcac gtggtgggtg
480
gggtgcagct ggtctggata gatagcttac agcagtagtg ggctctggaa tgcccaaggg
540
aagaggcaag gtggggcctg cagcctggac tcggcactca cagctgctgt gcaaactcag
600
gcagatctcc tgccctctct gagccttgct acttgaaaaa aacaggaccc tttccctcct
660

```

ttgggctccc tggaggtttt taagcagtac gtgcctccaa gttacctcca gatcagcagg
720
cacagggtggg cattgccagg tattttctga gcccctgagg gtttgaggcc ttgttttttag
780
tgctgagagc cagttgctgc cctgagaaga gaagacaacc tccatctatt tattgcttcc
840
tgagaactga cctggatgag gccctctgca gggcccagtc ttcagtcctg tggccctgg
900
actggtggga acctgaacta ggagtcctgg gagagctgtg gtgggaatat gggctggcac
960
tgctgcaggg caagaacatt catgtaggag cccgaggacc agcaggctgg gaatggggag
1020
caagtcacgt cagctctgtc attccccaca gttaacaaat tggcggggtg ggaagtcctg
1080
agtgtccgt cctctagca tcaactctga gctgcgggag aggtggccca gagaacagca
1140
gagtcagtta cacctgcagc tcttgtctaa agtgattaga tggccaccct caccactgtc
1200
cagtcacga gcagcctggc tgcctgtca tggcctcctg ggggcagaag gcatgtgga
1260
ccacgggatt tgtagccagc cagctcccag gccaacgccc aaagccctga tgacctggtt
1320
cttctgaggc cctcaacctg gcactctagg gtatggtcag gcaacagggt gaccagctgt
1380
cctggtttcc caggacatgg aactttcaat gctaaaactg ggacattacc cagcaagtgg
1440
ggatggttgg tcccctacca ggagagggcc tggggctctt gcttcccag aacgcctgtg
1500
gcttgaagaa ccttgactgc ttggtcctca ggtatctacc tcccaccttc tctcatctg
1560
tggagcaagc caactcagtg cccagaccc caccatgatct gcactcttgt ttgcatctcc
1620
agagacacct gaggccccag agcttgaggc aaagccaggc cgtccaaatc ctgtgtgccg
1680
tggacgagtg gccactttac tactcctaag gctaagatgt tgagagctca gaccactgct
1740
cagagcagta atccctgctc agaatgctcc cagttccctc gtccctgccc aggtctcttg
1800
tctcttggga aggaactgat aggtcgggcc attgttgggc catcattgag cgctcagtat
1860
ctcaagagac tctgttcatt ctgctcgtat cccaaggcct ggttgggtcaa actctgggca
1920
aagggttttc aggatgagga ggtcaagaca ggatgtccag agctaccgag ttcactctgtg
1980
ggtgttgggg gcaagtgggg gctgaagtcc tgtgcaggct gcgctggccc cacctgcctt
2040
gtgccctgga gtggggtttc tccttggtga agaagaggca tccttctctg atgtgcacaa
2100
acacaatgta tgaccagagc cttgcaactc aaagtgtggt ctgtggacca gcagcggcag
2160
tgacacctgg gagcttgta ggaatgcaga gtctaggcct caccctatac ctcccagctc
2220
agaccctgca ttttagcaag acccccagct gattcctata agcactttag agtttgagaa
2280

gcaaggacct aggcctgggga tgcctccga gcagagggtg aagtttctct cagttctctc
 2340
 cctgccactt ccagggatct gagcctgtgt tcagcctcct ccctaacca ccctgggaga
 2400
 cacttggcct gttagattgt tccagagtct gcatggcact cctgaagaag ggagtgtgac
 2460
 ctgcagtcac caggagatga gggtaggtg tgcccagccc tccagaccg gcctttctgg
 2520
 ttaaccctg catgccaagc tgctgtctgc cccaggtcct cacctcaggc ctttgaaggg
 2580
 gcagcttctg gaagttgttt tctcctctgc ttggagagtt tgcccttgtc tgtcttgaa
 2640
 agtgtgggca gccacagatg ccccaaatc agagctcaca gtgagtgagc ccctaagctt
 2700
 cagtctgcaa taaagaatgc attggtttca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2760
 aaaaaaaaaa
 2769

<210> 3880

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3880

Xaa	Met	Thr	Thr	Phe	Ser	Gln	Leu	Arg	Asp	Leu	His	Leu	Glu	Gly	Asn
1				5				10					15		
Phe	Leu	His	Arg	Leu	Pro	Ser	Glu	Val	Ser	Ala	Leu	Gln	His	Leu	Lys
			20				25					30			
Ala	Ile	Asp	Leu	Ser	Arg	Asn	Gln	Phe	Gln	Asp	Phe	Pro	Glu	Gln	Leu
		35				40					45				
Thr	Ala	Leu	Pro	Ala	Leu	Glu	Thr	Ile	Asn	Leu	Glu	Glu	Asn	Glu	Ile
	50				55					60					
Val	Asp	Val	Pro	Val	Glu	Lys	Leu	Ala	Ala	Met	Pro	Ala	Leu	Arg	Ser
65					70					75				80	
Ile	Asn	Leu	Arg	Phe	Asn	Pro	Leu	Asn	Ala	Glu	Val	Arg	Val	Ile	Ala
			85						90					95	
Pro	Pro	Leu	Ile	Lys	Phe	Asp	Met	Leu	Met	Ser	Pro	Glu	Gly	Ala	Arg
		100						105						110	
Ala	Pro	Leu	Pro												
			115												

<210> 3881

<211> 1393

<212> DNA

<213> Homo sapiens

<400> 3881

gatctgggtc cctggagcca gtacgtcct ccagagtga gccaggggga cagtggagcc
 60
 aaggaggcca aagtgaagct tctggggaaa cctgtgcaga tgccctctct gaactggcca
 120
 gaagccctgc cccacctcc tccttcttgt gaactgagct gcctagaagg gccggaggag
 180

gagctggagg gcagctcaga gccagaggag tgggtcccg ccaatgcctga gagaagtcac
 240
 ctgacggagc ccagctccag tggaggggtgg ctggtcacc catcccggaag ggaaaccccc
 300
 tctcccacac ctctctatgg acagcagtc acagccactc ttacaccctc acctcctgac
 360
 cctccccagc ccccaactga catgccccat ctccatcaga tgcccaggag ggtgccccctt
 420
 gggccgagtt cccctctcag tgtatcccag cccatgctgg gcatccgtga agcgaggcct
 480
 gctggcttgg gtgctggccc tgcagcctca cccacactca gcccagtc tgcccctagc
 540
 acagccagca gtgccccagg cagaacctgg caggggaatg gggagatgac tccccactt
 600
 caaggacccc gtgctcgatt ccggaagaaa cccaaggctc ttcctacag gagggagaac
 660
 agtctggggg acttgccccc accacccttg ccaccgccag agngaagagg cgagctgggc
 720
 cctagagctg agggcagcag gcagcatgtc ctccctggag cgggagcgca gtggggagag
 780
 gaaagcggtc caggccgtgc ccctggcagc ccagcgggtg ctccaccag atgaagaggc
 840
 ctgggtccca tacagcagac caagcttctt gtcccggggc cagggcacca gcacatgttc
 900
 cacggccggc agcaactctt ccaggggctc cagcagctct aggggctccc ggggcccctgg
 960
 ccggagccgg agtcggagtc agagccggag ccagagccaa aggccaggac agaaacgccg
 1020
 agaggaacca agatgaccct tgttggggca ttgagaatat catgagtgcc acggggaagg
 1080
 ggagtaggga tgtcttttcc ccccagcag tgatgagtgg ggctagctga agcccattgg
 1140
 tttccacgat ttcaattggc tgagaaggca gagagctagc tcctcccttt ctttcttttt
 1200
 ccacctgaga cttgtttata aaaaacaaaa caataaaaag agtctgatca gagcccaggg
 1260
 ccctgtctgt ctggttctgt gcagcaggtt ggaagaagg ggactgcagg gtctgtata
 1320
 tcaacgcaca ctggtagctt ctgcttcccc tgccatccgt caaaagcact aagttaggcc
 1380
 agcacaatgc cct
 1393

<210> 3882

<211> 277

<212> PRT

<213> Homo sapiens

<400> 3882

Asp	Leu	Gly	Pro	Trp	Ser	Gln	Tyr	Ala	Pro	Pro	Glu	Trp	Ser	Gln	Gly
1				5				10						15	
Asp	Ser	Gly	Ala	Lys	Gly	Gly	Lys	Val	Lys	Leu	Leu	Gly	Lys	Pro	Val
			20				25						30		
Gln	Met	Pro	Ser	Leu	Asn	Trp	Pro	Glu	Ala	Leu	Pro	Pro	Pro	Pro	Pro

[illegible]

```
<210> 3883
<211> 943
<212> DNA
<213> Homo sapiens
```

```
<400> 3883
ncccggggac gggggtcggg aaagagaaag aagaagagca ggaaagacac ctcgaggaac
60
tgctcggcct ccacatccca agagagaagc aagcagaagg cccggaggag aacaagatcc
120
agctcctcct cctctctctc cagttcttct agctcctctt ctctctcttc gtcctcctcc
180
tcttctctcca gtgatggcgg gaagaagcgg gggaagtaca aggacaagag gaggaagaag
240
aagaagaaga ggaagaagct gaagaagaag ggcaaggaga aggcggaagc acagcaggtg
300
gaggctctgc cgggcccctc gctggaccag tggcacccgat cagctgggga ggaagaggat
360
ggcccagtc tgcgggatga gcagggtccc aatccaggcc atgaagccca tgaccaagga
420
ggatggggatg cccggcgagag cgttatttca aagggtggtgg acccagagac ggggcgcacc
480
```

aggccttatta agggagatgg cgaggctccta gaggaaatcg taaccaaaga acgacacaga
 540
 gagatcaaca aggtgggtgt ggcctctctg cctgccatcc gccccagct ctgtttgtga
 600
 tgtacccttc ctctgtgtg cttctctccc cagcaagcca cccgagggga ctgcctggcc
 660
 ttccagatgc gagctgggtt gcttcctga gggccccgc tggccaaggc ctgtggacga
 720
 cgctggcggc ccagcctggg caggtttcag ggtgccagt ggaagcctga tgggtgctgg
 780
 tggcctttcc cccgtggatt ggtctctggc ccagcccagt ctctctcag gggcaggggg
 840
 tggaggttg ggtcaccggc ctgcttgga ccccatctg aaagagcagc acttctcagc
 900
 tattaaaggc cccctggata gacaaaaaaaa aaaaaaaaaa aaa
 943

<210> 3884
 <211> 199
 <212> PRT
 <213> Homo sapiens

<400> 3884
 Xaa Arg Gly Arg Gly Ser Glu Lys Arg Lys Lys Lys Ser Arg Lys Asp
 1 5 10 15
 Thr Ser Arg Asn Cys Ser Ala Ser Thr Ser Gln Glu Arg Ser Lys Gln
 20 25 30
 Lys Ala Arg Arg Arg Thr Arg Ser Ser Ser Ser Ser Ser Ser Ser
 35 40 45
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
 50 55 60
 Asp Gly Arg Lys Lys Arg Gly Lys Tyr Lys Asp Lys Arg Arg Lys Lys
 65 70 75 80
 Lys Lys Lys Arg Lys Lys Leu Lys Lys Lys Gly Lys Glu Lys Ala Glu
 85 90 95
 Ala Gln Gln Val Glu Ala Leu Pro Gly Pro Ser Leu Asp Gln Trp His
 100 105 110
 Arg Ser Ala Gly Glu Glu Glu Asp Gly Pro Val Leu Thr Asp Glu Gln
 115 120 125
 Val Pro Asn Pro Gly His Glu Ala His Asp Gln Gly Gly Trp Asp Ala
 130 135 140
 Arg Gln Ser Val Ile Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr
 145 150 155 160
 Arg Leu Ile Lys Gly Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys
 165 170 175
 Glu Arg His Arg Glu Ile Asn Lys Val Gly Val Ala Pro Leu Pro Ala
 180 185 190
 Ile Arg Pro Gln Leu Cys Leu
 195

<210> 3885
 <211> 1671
 <212> DNA
 <213> Homo sapiens

<400> 3885
cctaggctcc cccctcctcc catccccagc ctgggggaac cttcagegtc tctcctccct
60
gtaggcccc gctcagcttc ccaggaactt ttgttggtgg gtactagtgg ggtaaggcag
120
ttcttcccat catgaggagg accttgggag actttcatta ccaaatecat tgctgccccg
180
accttccctg gactgatctg ggtcaccttg gtctcctgat cttggagaag tcaagttctt
240
atcccagact tgagagggtta caagcctcca ggtctctggc aaagtgtgga gatgatggac
300
agccatttgt acacacacca gccagtccct tagcatatct ctcttggttt tgtctcaggt
360
ctgctcagc cactccctg acgtgtccc actgtgtgga tgtggtgaag gggcttctg
420
attttaagaa gaggagaggt cactcaattg ggggagcccc tgagcagcga taccagatca
480
tccctgtgtg tgtggctgcc cgacttccta cccgggctca ggatgtgctg cagcctcctg
540
gccactggag gggctgaccg cctgatccac ctctggaatg ttgtgggaag tcgcctggag
600
gccaaccaga ccctggaggg agctggtggc agcatcacca gtgtggactt tgaccctcg
660
ggctaccagg ttttagcagc aacttacaac caggctgccc agctctgga gggtggggag
720
gcacagtcca aggagacact gtctggacac aaggataagg tgacagctgc caaattcaag
780
ctaacgagc accaggcagt gactgggagc cgcgaccgga cagtgaagga gtgggacctc
840
ggcgtgcct attgctccag gaccatcaat gtccttctct actgtaatga cgtggtgntg
900
tggggacct atcatcatnn tagtggccac aatgaccaga agatccggtt ctgggacagc
960
nnagggggcc cactgcacc caggatcatc ctgntgcagg gccgggtcac ctccctgagc
1020
ctcagencac gaccaactnn gcacctgctc agctgttccc gagacaacac actcaaggtc
1080
atcgacctgc gtgtcagcaa catccgccag gtgttcaggg ccgatggctt caagtgtggt
1140
tctgactgga ccaaagctgt gttcagccc gacagaagct atgcactggc aggctcctgt
1200
gatggggccc ttacatctg ggatgtggac accgggaaac tggagagcag actacaggga
1260
ccccattgct ctgccgtcaa cgccgtggcc tgggtgctact ccgggagcca catggtgagc
1320
gtggaccagg gcaggaagggt tgtgctctgg cagtagggcc acgacctgcc tgctgggct
1380
ggagctcttg cccgaagcct gaagcttctt tcggcgccat gcaggggttg gggttgggac
1440
tggagctggc cttgggattt aatggggaag aaggcctggc aggacctggc ctgtttgttt
1500
aaaaatgaag tatgggttgg gggattacgc tagttttctt ttgtattttt atctctatct
1560

atctcctcac tttttctccc aaagtagaaa aaaatgatat ctgaaaaaaaa aaaaaaaaaa
 1620
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1671

<210> 3886
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 3886
 Met Cys Cys Ser Leu Leu Ala Thr Gly Gly Ala Asp Arg Leu Ile His
 1 5 10 15
 Leu Trp Asn Val Val Gly Ser Arg Leu Glu Ala Asn Gln Thr Leu Glu
 20 25 30
 Gly Ala Gly Gly Ser Ile Thr Ser Val Asp Phe Asp Pro Ser Gly Tyr
 35 40 45
 Gln Val Leu Ala Ala Thr Tyr Asn Gln Ala Ala Gln Leu Trp Lys Val
 50 55 60
 Gly Glu Ala Gln Ser Lys Glu Thr Leu Ser Gly His Lys Asp Lys Val
 65 70 75 80
 Thr Ala Ala Lys Phe Lys Leu Thr Arg His Gln Ala Val Thr Gly Ser
 85 90 95
 Arg Asp Arg Thr Val Lys Glu Trp Asp Leu Gly Arg Ala Tyr Cys Ser
 100 105 110
 Arg Thr Ile Asn Val Leu Ser Tyr Cys Asn Asp Val Val Xaa Trp Gly
 115 120 125
 Pro Tyr His His Xaa Ser Gly His Asn Asp Gln Lys Ile Arg Phe Trp
 130 135 140
 Asp Ser Xaa Gly Gly Pro Thr Ala Pro Arg Ser Ser Leu Xaa Gln Gly
 145 150 155 160
 Arg Val Thr Ser Leu Ser Leu Ser Xaa Arg Pro Thr Xaa His Leu Leu
 165 170 175
 Ser Cys Ser Arg Asp Asn Thr Leu Lys Val Ile Asp Leu Arg Val Ser
 180 185 190
 Asn Ile Arg Gln Val Phe Arg Ala Asp Gly Phe Lys Cys Gly Ser Asp
 195 200 205
 Trp Thr Lys Ala Val Phe Ser Pro Asp Arg Ser Tyr Ala Leu Ala Gly
 210 215 220
 Ser Cys Asp Gly Ala Leu Tyr Ile Trp Asp Val Asp Thr Gly Lys Leu
 225 230 235 240
 Glu Ser Arg Leu Gln Gly Pro His Cys Ala Ala Val Asn Ala Val Ala
 245 250 255
 Trp Cys Tyr Ser Gly Ser His Met Val Ser Val Asp Gln Gly Arg Lys
 260 265 270
 Val Val Leu Trp Gln
 275

<210> 3887
 <211> 5612
 <212> DNA
 <213> Homo sapiens

<400> 3887

nngggcccag cagccactga gccagcaggc gggatcgagg ccggcaacat ggcgagcgct
60
tcgtaccaca tctccaactt gctggaaaaa atgacatcca gcgacaagga cttcaggttt
120
atggctacaa atgatctgat gacagaactg cagaaagact ccatcaagct ggatgatgac
180
agcgaaagga aagtcgtaaa gatgattctg aagttgctgg aggataaaaa tggcgaagtg
240
cagaacttag ctgtgaaatg tcttggctct ttagtgagta aagtgaaga gtaccaagtt
300
gagacgattg tagataccct ctgcactaac atgctttctg ataaagaaca acttcgagac
360
atttcaagta ttggtcttaa aacagtaatt ggagaacttc ctccagcttc cagtggctct
420
gcattagctg ctaatgtatg taaaaagatt actggacgtc ttacaagtgc aatagcaaaa
480
caggaagatg tctctgttca gctagaagcc ttggatatta tggctgatat gttgagcagg
540
caaggaggac ttcttgttaa ttccatcct tcaattctga cctgtctact tccccagttg
600
accagcccta gacttgcagt gaggaaga accattatcg ctcttgcca tctggttatg
660
agctgtggaa atatagtttt tgtagatctt attgaacatc tgttgcaga gttgtccaaa
720
aatgattcta tgtaacaac aagaacctac atacaatgta ttgctgctat tagtaggcaa
780
gctggtcata gaataggatg atacctgag aagataattc ctttgggtgt aaaattttgc
840
aatgtagatg atgatgaatt aagagagtac tgtattcaag ctttgaatc atttgaaga
900
agatgtccta aggaagtata tcctcatgtt tctaccatta taaatatttg tcttaaatat
960
cttacctatg atccaaatta taattacgat gatgaagatg aagatgaaaa tgcaatggat
1020
gctgatggtg gtgatgatga tgatcaaggg agtgatgatg aatcacgtga tgatgatgac
1080
atgagttgga aagtgaagc tgcagctgcg aagtgcttgg atgctgtagt tagcacaagg
1140
catgaaatgc ttccagaatt ctacaagacc gtctctctcg cactaatatc cagattttaa
1200
gagcgtgaag agaattgtaa ggcagatggt ttccacgcat acctttctct tttgaagcaa
1260
actcgtcctg taaaaagttg gctatgtgac cctgatgcaa tggagcaggg agaaacacct
1320
ttaacaatgc ttcagagtca gggtcccaac attgttaaag ctcttcacaa acagatgaaa
1380
gaaaaaagtg tgaagaccgg acagtgttgt tttaacatgt taactgagct ggtaaatgta
1440
ttacctgggg ccctaactca acacattcct gtacttgtac caggaatcat tttctcactg
1500
aatgataaat caagctcatc gaatttgaag atcgatgctt tgtcatgtct atacgtaatc
1560
ctctgtaacc attctctca agtcttccat cctcacgttc aggttttggg tcctccagtg
1620

gtggccttggtg ttggagaccc attttataaaa attacatctg aagcacttct tgttactcaa
1680
cagcttgtca aagtaattcg tccttttagat cagccttcct cgtttgatgc aactccttat
1740
atcaaagatc tatttacctg taccattaag agattaaaag cagctgacat tgatcaggaa
1800
gtcaaggaaa gggctatttc ctgtatggga caaattatct gcaaccttgg agacaatttg
1860
ggttctgact tgcctaatac acttcagatt ttcttggaga gactaaagaa tgaaattacc
1920
aggtttaacta cagtaaaggc attgacactg attgtgggt cacctttgaa gatagatttg
1980
aggcctgttc tgggagaagg ggttcctatc cttgcttcat ttcttagaaa aaaccagaga
2040
gctttgaaac tgggtactct ttctgccctt gatattctaa taaaaaacta tagtgacagc
2100
ttgacagctg ccattgattga tgcagttcta gatgagctcc cacctcttat cagcgaaagt
2160
gatatgcatg tttcacaaat ggccatcagt tttcttacca ctttggcaaa agtatatccc
2220
tcctcccttt caaagataag tggatccatt ctcaatgaac ttattggact tgtgagatca
2280
cccttattgc aggggggagc tcttagtgcc atgctagact tttccaagc tctggttgct
2340
actggaacaa ataatttagg atacatggat ttggtgcgca tgctgactgg tccagtttac
2400
tctcagagca cagctcttac tcataagcag tcttattatt ccattgcaa atgtgtagct
2460
gcccttactc gagcatgcc taaagaggga ccagctgtag taggtcagtt tattcaagat
2520
gtcaagaact caaggtctac agattccatt cgtctcttag ctctacttct tcttggagaa
2580
gttgggcatc atattgactt aagtgagcag ttggaactaa aatctgtaat actagaagct
2640
ttctcatctc ctagtgaaga agtcaaatca gctgcatcct atgcattagg cagcattagt
2700
gtgggcaacc ttctgaata tctgccgttt gtctgcaag aaataactag tcaacccaaa
2760
aggcagtatc ttttaactca ttcttgaag gaaattatta gctctgcatc agtgggtggc
2820
cttaaaccat atgttgaaaa catctgggccc ttattactaa agcactgtga gtgtgcagag
2880
gaaggaaacca gaaatgttgt tgctgaatgt ctaggaaaac tcactcta attgatccagaa
2940
actctccttc caccgcttaa ggggtacttg atatcaggct catcatatgc ccgaagctca
3000
gtggttacgg ctgtgaaatt tacaatttct gaccatccac aacctattga tccactgtta
3060
aagaactgca taggtgattt cctaaaaact ttggaagacc cagatttgaa tgtgagaaga
3120
gtagccttgg tcacatttaa ttcagcagca cataacaagc catcattaat aagggatcta
3180
ttggatactg ttctccaca tctttacaat gaaacaaaag ttagaaagga gcttataaga
3240

gaggtagaaa tgggtccatt taaacatacg gttgatgatg gtctggatat tagaaaggca
3300
gcatttgagt gtatgtacac acttctagac agttgtcttg atagacttga tatctttgaa
3360
tttctaaatc atgttgaaga tggtttgaag gaccattatg atattaagat gctgacattt
3420
ttaatgttgg tgagactgtc taccctttgt ccaagtgcag tactgcagag gttggaccga
3480
cttgttgagc cattacgtgc aacatgtaca actaaggtaa aggcaaactc agtaaagcag
3540
gagtttgaaa aacaagatga attaaagcga tctgccatga gagcagtagc agcactacta
3600
accattccag aagcagagaa gagtccactg atgagtgaat tccagtcaca gatcagttct
3660
aaccctgagc tggcggctat ctttgaaagt atccagaaag attcatcatc tactaacttg
3720
gaatcaatgg acactagtta gatgtttgtt caccatgggg accattacat atgaccatac
3780
aatgcactga attgacaggt taatcataag acatggaaag agaagtgtct aaaagcttca
3840
aaatgttcca ctttttttct cttcatggag actgtttgtt tggctttctt ccattgttgt
3900
ttttgtagca tttatttcag aaatgtgtat ttccataatc cagagggtgt aaaaccacta
3960
gtgttttagt gggtacagca acatttgaaa tggaaactaa aagttaggat tttatggagt
4020
atggagatag ggtccagtat ctattttacc tgtaatgttt aggattaaaa tgttaaaatt
4080
ttgtgaccat gaattttctt cttttataaa ttttctcatt taaaaatcaa aaatcttgca
4140
aaacaaaaac catgtttctt tttcttgtat aactttttgt tttcagcaac ataaattgat
4200
ttttagctgg cagacaagaa tatccatata agatttgta accatttcag agagtttggc
4260
aatttttaaa agataataag gtatcatttt taagtatgaa aattaacaat atccctgttg
4320
cgcacactaa ttttgcata gtaagtttac aaatatgtat cgtctgtaaa gcagcatgtg
4380
cagattattc ataatataga agttaaaata agtattagt caattttcag atattttatt
4440
ttgcacagaa aacacattat ctggagagaa agaaaggaga atttttgaga cttgggtttt
4500
cttaatgccg gtgtgaattt gcagatgttt tcagaaaatc aagtcacagt aacaatttgc
4560
cacttttttc tgttataaat cttcttactt aaattttgaa tatttagttt ttctcagtta
4620
ccattttgtg tgtgtgtgat tccacttaga aattcttaaa accagatttt tctttcattc
4680
cgtttggatg tctacattcc ttatcaaagg atataaatac tgtgtatgct tttgaatttt
4740
attttttaga aaattctgaa gccagctatc acagggttgt tagctaataa tagtattttc
4800
ttttagttga gttaggtttt tccccatctc ctgtagagcg aatttacata ttgtattggg
4860

taagtgttca ctacttttcc tgattaaggg atctgtgctg gggaacaaag cttttgcagt
 4920
 accttatatt gtagttaaaa ttttatttaa catatccttc agtgagctca tttcacactg
 4980
 tagcctcttc cttaaaatct gtggtgctcc tgtaacagta agaactaatt ctgaaataaa
 5040
 agacatctcc taatgctgtg caaacatagt ttacatgtat tgaaggaggc agttgttaaa
 5100
 ttgagtgacc aatttaagca atcagatatt tgaaaactgc accctttagt tttgaaactg
 5160
 tgaattagaa acacttttcc tgctgtatta ctacctgctt taacatccaa atatacagt
 5220
 attttaaatg ataacatact gtggttatta gattaacagc ttgattttga atgttcagat
 5280
 gataatgcag aagacatcac ttctagtaag gattttgact agtgcattga tgttgaagtt
 5340
 ggtgccattt caaaatgtgg caggtgataa tcttttacca taatttgcac aaaactgtaa
 5400
 tagaagttta ttttgagatg ttagtatatt atgtactatg catttctgtg gtatagatgt
 5460
 tgtggatata ttttaagtatt tggttacatg gttttacaat aaattacaat actgcaggct
 5520
 ctaggactga acaggagact gacatgcata tgttgtgtga atgtcttagt tgggtaaagt
 5580
 taaatccaaa tacttcaact ggcaaaaaaa aa
 5612

<210> 3888

<211> 1230

<212> PRT

<213> Homo sapiens

<400> 3888

Met	Ala	Ser	Ala	Ser	Tyr	His	Ile	Ser	Asn	Leu	Leu	Glu	Lys	Met	Thr
1				5					10					15	
Ser	Ser	Asp	Lys	Asp	Phe	Arg	Phe	Met	Ala	Thr	Asn	Asp	Leu	Met	Thr
			20					25					30		
Glu	Leu	Gln	Lys	Asp	Ser	Ile	Lys	Leu	Asp	Asp	Asp	Ser	Glu	Arg	Lys
		35					40					45			
Val	Val	Lys	Met	Ile	Leu	Lys	Leu	Leu	Glu	Asp	Lys	Asn	Gly	Glu	Val
	50					55					60				
Gln	Asn	Leu	Ala	Val	Lys	Cys	Leu	Gly	Pro	Leu	Val	Ser	Lys	Val	Lys
65					70				75					80	
Glu	Tyr	Gln	Val	Glu	Thr	Ile	Val	Asp	Thr	Leu	Cys	Thr	Asn	Met	Leu
			85					90					95		
Ser	Asp	Lys	Glu	Gln	Leu	Arg	Asp	Ile	Ser	Ser	Ile	Gly	Leu	Lys	Thr
			100					105					110		
Val	Ile	Gly	Glu	Leu	Pro	Pro	Ala	Ser	Ser	Gly	Ser	Ala	Leu	Ala	Ala
		115					120					125			
Asn	Val	Cys	Lys	Lys	Ile	Thr	Gly	Arg	Leu	Thr	Ser	Ala	Ile	Ala	Lys
	130					135					140				
Gln	Glu	Asp	Val	Ser	Val	Gln	Leu	Glu	Ala	Leu	Asp	Ile	Met	Ala	Asp
145					150					155				160	
Met	Leu	Ser	Arg	Gln	Gly	Gly	Leu	Leu	Val	Asn	Phe	His	Pro	Ser	Ile

				165						170						175			
Leu	Thr	Cys	Leu	Leu	Pro	Gln	Leu	Thr	Ser	Pro	Arg	Leu	Ala	Val	Arg				
			180					185					190						
Lys	Arg	Thr	Ile	Ile	Ala	Leu	Gly	His	Leu	Val	Met	Ser	Cys	Gly	Asn				
		195					200					205							
Ile	Val	Phe	Val	Asp	Leu	Ile	Glu	His	Leu	Leu	Ser	Glu	Leu	Ser	Lys				
	210					215					220								
Asn	Asp	Ser	Met	Ser	Thr	Thr	Arg	Thr	Tyr	Ile	Gln	Cys	Ile	Ala	Ala				
225					230					235					240				
Ile	Ser	Arg	Gln	Ala	Gly	His	Arg	Ile	Gly	Glu	Tyr	Leu	Glu	Lys	Ile				
			245						250					255					
Ile	Pro	Leu	Val	Val	Lys	Phe	Cys	Asn	Val	Asp	Asp	Asp	Glu	Leu	Arg				
		260						265					270						
Glu	Tyr	Cys	Ile	Gln	Ala	Phe	Glu	Ser	Phe	Val	Arg	Arg	Cys	Pro	Lys				
	275						280					285							
Glu	Val	Tyr	Pro	His	Val	Ser	Thr	Ile	Ile	Asn	Ile	Cys	Leu	Lys	Tyr				
	290					295				300									
Leu	Thr	Tyr	Asp	Pro	Asn	Tyr	Asn	Tyr	Asp	Asp	Glu	Asp	Glu	Asp	Glu				
305					310					315					320				
Asn	Ala	Met	Asp	Ala	Asp	Gly	Gly	Asp	Asp	Asp	Asp	Gln	Gly	Ser	Asp				
			325						330					335					
Asp	Glu	Tyr	Ser	Asp	Asp	Asp	Asp	Met	Ser	Trp	Lys	Val	Arg	Arg	Ala				
		340						345					350						
Ala	Ala	Lys	Cys	Leu	Asp	Ala	Val	Val	Ser	Thr	Arg	His	Glu	Met	Leu				
	355						360					365							
Pro	Glu	Phe	Tyr	Lys	Thr	Val	Ser	Pro	Ala	Leu	Ile	Ser	Arg	Phe	Lys				
	370					375					380								
Glu	Arg	Glu	Glu	Asn	Val	Lys	Ala	Asp	Val	Phe	His	Ala	Tyr	Leu	Ser				
385					390					395				400					
Leu	Leu	Lys	Gln	Thr	Arg	Pro	Val	Gln	Ser	Trp	Leu	Cys	Asp	Pro	Asp				
			405						410					415					
Ala	Met	Glu	Gln	Gly	Glu	Thr	Pro	Leu	Thr	Met	Leu	Gln	Ser	Gln	Val				
	420							425				430							
Pro	Asn	Ile	Val	Lys	Ala	Leu	His	Lys	Gln	Met	Lys	Glu	Lys	Ser	Val				
	435						440					445							
Lys	Thr	Arg	Gln	Cys	Cys	Phe	Asn	Met	Leu	Thr	Glu	Leu	Val	Asn	Val				
	450					455					460								
Leu	Pro	Gly	Ala	Leu	Thr	Gln	His	Ile	Pro	Val	Leu	Val	Pro	Gly	Ile				
465					470					475				480					
Ile	Phe	Ser	Leu	Asn	Asp	Lys	Ser	Ser	Ser	Asn	Leu	Lys	Ile	Asp					
			485						490					495					

595	600	605
Pro Asn Thr Leu Gln Ile Phe Leu Glu Arg Leu Lys Asn Glu Ile Thr		
610	615	620
Arg Leu Thr Thr Val Lys Ala Leu Thr Leu Ile Ala Gly Ser Pro Leu		
625	630	635
Lys Ile Asp Leu Arg Pro Val Leu Gly Glu Gly Val Pro Ile Leu Ala		640
	645	650
Ser Phe Leu Arg Lys Asn Gln Arg Ala Leu Lys Leu Gly Thr Leu Ser		655
	660	665
Ala Leu Asp Ile Leu Ile Lys Asn Tyr Ser Asp Ser Leu Thr Ala Ala		670
	675	680
Met Ile Asp Ala Val Leu Asp Glu Leu Pro Pro Leu Ile Ser Glu Ser		685
	690	695
Asp Met His Val Ser Gln Met Ala Ile Ser Phe Leu Thr Thr Leu Ala		700
705	710	715
Lys Val Tyr Pro Ser Ser Leu Ser Lys Ile Ser Gly Ser Ile Leu Asn		720
	725	730
Glu Leu Ile Gly Leu Val Arg Ser Pro Leu Leu Gln Gly Gly Ala Leu		735
	740	745
Ser Ala Met Leu Asp Phe Phe Gln Ala Leu Val Val Thr Gly Thr Asn		750
	755	760
Asn Leu Gly Tyr Met Asp Leu Leu Arg Met Leu Thr Gly Pro Val Tyr		765
	770	775
Ser Gln Ser Thr Ala Leu Thr His Lys Gln Ser Tyr Tyr Ser Ile Ala		780
785	790	795
Lys Cys Val Ala Ala Leu Thr Arg Ala Cys Pro Lys Glu Gly Pro Ala		800
	805	810
Val Val Gly Gln Phe Ile Gln Asp Val Lys Asn Ser Arg Ser Thr Asp		815
	820	825
Ser Ile Arg Leu Leu Ala Leu Leu Ser Leu Gly Glu Val Gly His His		830
	835	840
Ile Asp Leu Ser Gly Gln Leu Glu Leu Lys Ser Val Ile Leu Glu Ala		845
	850	855
Phe Ser Ser Pro Ser Glu Glu Val Lys Ser Ala Ala Ser Tyr Ala Leu		860
865	870	875
Gly Ser Ile Ser Val Gly Asn Leu Pro Glu Tyr Leu Pro Phe Val Leu		880
	885	890
Gln Glu Ile Thr Ser Gln Pro Lys Arg Gln Tyr Leu Leu Leu His Ser		895
	900	905
Leu Lys Glu Ile Ile Ser Ser Ala Ser Val Val Gly Leu Lys Pro Tyr		910
	915	920
Val Glu Asn Ile Trp Ala Leu Leu Lys His Cys Glu Cys Ala Glu		925
	930	935
Glu Gly Thr Arg Asn Val Val Ala Glu Cys Leu Gly Lys Leu Thr Leu		940
945	950	955
Ile Asp Pro Glu Thr Leu Leu Pro Arg Leu Lys Gly Tyr Leu Ile Ser		960
	965	970
Gly Ser Ser Tyr Ala Arg Ser Ser Val Val Thr Ala Val Lys Phe Thr		975
	980	985
Ile Ser Asp His Pro Gln Pro Ile Asp Pro Leu Leu Lys Asn Cys Ile		990
	995	1000
Gly Asp Phe Leu Lys Thr Leu Glu Asp Pro Asp Leu Asn Val Arg Arg		1005
1010	1015	1020
Val Ala Leu Val Thr Phe Asn Ser Ala Ala His Asn Lys Pro Ser Leu		

1025 1030 1035 1040
 Ile Arg Asp Leu Leu Asp Thr Val Leu Pro His Leu Tyr Asn Glu Thr
 1045 1050 1055
 Lys Val Arg Lys Glu Leu Ile Arg Glu Val Glu Met Gly Pro Phe Lys
 1060 1065 1070
 His Thr Val Asp Asp Gly Leu Asp Ile Arg Lys Ala Ala Phe Glu Cys
 1075 1080 1085
 Met Tyr Thr Leu Leu Asp Ser Cys Leu Asp Arg Leu Asp Ile Phe Glu
 1090 1095 1100
 Phe Leu Asn His Val Glu Asp Gly Leu Lys Asp His Tyr Asp Ile Lys
 1105 1110 1115 1120
 Met Leu Thr Phe Leu Met Leu Val Arg Leu Ser Thr Leu Cys Pro Ser
 1125 1130 1135
 Ala Val Leu Gln Arg Leu Asp Arg Leu Val Glu Pro Leu Arg Ala Thr
 1140 1145 1150
 Cys Thr Thr Lys Val Lys Ala Asn Ser Val Lys Gln Glu Phe Glu Lys
 1155 1160 1165
 Gln Asp Glu Leu Lys Arg Ser Ala Met Arg Ala Val Ala Ala Leu Leu
 1170 1175 1180
 Thr Ile Pro Glu Ala Glu Lys Ser Pro Leu Met Ser Glu Phe Gln Ser
 1185 1190 1195 1200
 Gln Ile Ser Ser Asn Pro Glu Leu Ala Ala Ile Phe Glu Ser Ile Gln
 1205 1210 1215
 Lys Asp Ser Ser Ser Thr Asn Leu Glu Ser Met Asp Thr Ser
 1220 1225 1230

<210> 3889

<211> 556

<212> DNA

<213> Homo sapiens

<400> 3889

gctctgccgg gccctcgct ggaccagtgg caccgatcag ctggggagga agaggatggc
 60
 ccagtcctga cggatgagca ggtcccgaat ccaggccatg aagcccatga ccaaggagga
 120
 tgggatgccc ggcagagcat catccgcaag gtggtggacc ctgagacggg gcgcaccagg
 180
 cttattaagg gagatggcga ggtcctagag gaaatcgtaa ccaaagaacg acacagagag
 240
 atcaacaagc aagccaccgg aggggactgc ctggccttcc agatgcgagc tgggttgett
 300
 ccctgagggc ccccgctggc caaggcctgt ggacgacgct ggcggcccag cctgggcagg
 360
 tttcagggtg ccagtgaggaa gcctgatggg tgctggtggc ctttcccccg tggattggtc
 420
 tctggcccag cccagtctct tctcaggggc agggggtgga ggttggggtc accggcctgc
 480
 ttggcacccc catctgaaag agcagcactt ctcagctatt aaaggccccc tggatagaca
 540
 aaaaaaaaaa aaaaaa
 556

<210> 3890

<211> 101
 <212> PRT
 <213> Homo sapiens

<400> 3890
 Ala Leu Pro Gly Pro Ser Leu Asp Gln Trp His Arg Ser Ala Gly Glu
 1 5 10 15
 Glu Glu Asp Gly Pro Val Leu Thr Asp Glu Gln Val Pro Asn Pro Gly
 20 25 30
 His Glu Ala His Asp Gln Gly Gly Trp Asp Ala Arg Gln Ser Ile Ile
 35 40 45
 Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr Arg Leu Ile Lys Gly
 50 55 60
 Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys Glu Arg His Arg Glu
 65 70 75 80
 Ile Asn Lys Gln Ala Thr Arg Gly Asp Cys Leu Ala Phe Gln Met Arg
 85 90 95
 Ala Gly Leu Leu Pro
 100

<210> 3891
 <211> 1687
 <212> DNA
 <213> Homo sapiens

<400> 3891
 ncctaggcta cacagaccgt gtggtgcgag ctttccgctg ggaggagcta ggtgagggtc
 60
 ctgaacatct ggccgtatcc acaacaagaa tgtctccact cacctaattg gcaacatcaa
 120
 acaggccacg gcaactgagag tagtggtctt ggccctctttg ccctgtgcac cctggatggg
 180
 aactgaagc tcatggaaga aatggaagaa gcagacaagc tgctgtggtc agtcaggtg
 240
 gatcaccagc tctttgccct ggagaaactg gatgtcaccg gcaacgggca tgaggaggta
 300
 gttgcatgcg cctgggatgg acagacatat atcattgatc acaaccgcac cgtcgtccgc
 360
 ttccaagtgg atgaaaatat ccgtgccttc tgtgcaggcc tgtacgcctg caaagagggc
 420
 cgcaacagcc cctgcctcgt atatgtcact ttcaaccaga agatctatgt gtactgggag
 480
 gtgcagctgg agcggatgga gtctaccaat ctggtgaaac tgctggagac caagccgagt
 540
 accacagcct gctgcaggag ctgggcgtgg atcctgacga cctccctgtg actcgtgccc
 600
 tgettcacca aacgctctac catecagacc agccaccaca gtgtgctccc tcaagcctcc
 660
 aggatccac ctagctgtac ttgcctcata gctggtgaag gattcttctg aacccccacc
 720
 ctaccccccta aaggtatctg tggattggc aggataggga atatgatta cagaaatgca
 780
 ggatttgact ctgggcatga aagatggcag cagccctagg gtgaccgtga actatagacc
 840

tcgcagtcctt ttcgggtgaaa gaagagacaa gttgaccctc tgcccatttc cttatggacc
 900
 tcacccatca tgccagcagg gtcataggac ctggccttgt tccaaatcat ctgggacatg
 960
 acccaactccc cactgtcact gtgttgaaaa cagagacttg tttgtgtggc cccaacaccc
 1020
 ataaggaac caggcttttag gcccagggga gcagtggagg taagggtccc accccatctt
 1080
 aagctctgtc ttcctgtgga caattccaag ttcttgacgt tagtaattgt taaaggaatg
 1140
 gcaaactgtt ttgttttgaa ggatctttct acagtctggg cttacccatg ttcctagcaa
 1200
 ccctgagatg attttcttcc atttaccaaa gcagccgggt cagtgccttc tcacgttgcc
 1260
 gtattcttca ggtattagtc agcttcagaa gccctgtccc catttttcca cccaccatt
 1320
 cccccataaa acagcttatt gtctccaaga caatagacat ttaaaatgtg atgcgggttt
 1380
 atgatccaga ccacaatcag aattatatct tgggtcattt atgtgccgtc tgttcttgat
 1440
 tctctatgct ctaaatcggg gtttttcaaa ctgtgggtgc agtcctttgg tggattatgg
 1500
 ccagcatttt ttaaataggt agaatagaat aaagtaaaat agaaaaatgc agagtacatt
 1560
 gctctcagtg taggtaagta ttgttttggt agtcatatgt gcattgtgtg actgagtgcc
 1620
 atgtaaaaatg tattcctgct gtggtgaagct gtggtcgagg agtttgaaag ccattgcttt
 1680
 caaatc
 1687

<210> 3892

<211> 179

<212> PRT

<213> Homo sapiens

<400> 3892

Val	Arg	Val	Leu	Asn	Ile	Trp	Pro	Tyr	Pro	Gln	Gln	Glu	Cys	Leu	His
1				5					10					15	
Ser	Pro	Asn	Trp	Gln	His	Gln	Thr	Gly	His	Gly	Thr	Glu	Ser	Ser	Gly
		20						25					30		
Ser	Gly	Leu	Phe	Ala	Leu	Cys	Thr	Leu	Asp	Gly	Thr	Leu	Lys	Leu	Met
		35					40					45			
Glu	Glu	Met	Glu	Glu	Ala	Asp	Lys	Leu	Leu	Trp	Ser	Val	Gln	Val	Asp
		50				55					60				
His	Gln	Leu	Phe	Ala	Leu	Glu	Lys	Leu	Asp	Val	Thr	Gly	Asn	Gly	His
65				70					75					80	
Glu	Glu	Val	Val	Ala	Cys	Ala	Trp	Asp	Gly	Gln	Thr	Tyr	Ile	Ile	Asp
		85						90					95		
His	Asn	Arg	Thr	Val	Val	Arg	Phe	Gln	Val	Asp	Glu	Asn	Ile	Arg	Ala
		100					105					110			
Phe	Cys	Ala	Gly	Leu	Tyr	Ala	Cys	Lys	Glu	Gly	Arg	Asn	Ser	Pro	Cys
		115				120					125				
Leu	Val	Tyr	Val	Thr	Phe	Asn	Gln	Lys	Ile	Tyr	Val	Tyr	Trp	Glu	Val

130		135		140	
Gln	Leu	Glu	Arg	Met	Glu
145		150		155	
Lys	Pro	Ser	Thr	Thr	Ala
		165		170	
Thr	Ser	Leu			

<210> 3893
 <211> 1591
 <212> DNA
 <213> Homo sapiens

<400> 3893
 cgcgttctgc agaagttaga tgacgatgga ttgccgttta taggagcaaa actgcagtac
 60
 ggagatccgt attacagcta cctcaacctc aacaccgggg aaagttttgt gatgtactat
 120
 aagagtaaaag aaaatttgtt tgtggataac atcaaagtgt gcagtaatga cactgggagt
 180
 ggaaaattca agtgtgtttg catcactatg agagtgcctc ggaacccaac tatcggagat
 240
 aaatttgcca gtcgccatgg gcagaagggc attttaagca gattgtggcc ggctgaggac
 300
 atgcctttta ctgagagtgg gatgggtcca gacattctgt tcaatcccca tggttttcca
 360
 tccgcgatga ccattgggat gttaattgag agtatggccg ggaagtctgc agctttgcat
 420
 ggtctctgcc atgatgctac acccttcac ttctcagagg agaactcggc cttagaatac
 480
 tttggtgaga tgtaaaggc tgctggctac aatttctatg gcaccgagag gttatatagt
 540
 ggcacagtg ggctagaact ggaagcagac atcttcatag gagtggttta ttatcagegc
 600
 ttacgccata tggcttcaga caaatttcaa gtaaggacaa ctggagcccg agacagagtc
 660
 accaaccagc ctattggggg aagaaatgtc caggggtggaa tccgttttgg ggagatggaa
 720
 cgggatgcgc ttttagctca tggtagatct tttctccttc atgacgcct cttcaactgc
 780
 tcagatcggg cggtagccca tgtgtgtgtg aagtgtggca gtttactctc tccactgttg
 840
 gagaagccac ccccttcttg gtctgccatg cgcaacagaa aatacaactg tactctgtgt
 900
 agtcgcagtg acactatcga tactgtttct gtgccttatg ttttcggta tttgtagct
 960
 gaactggcag ctatgaacat caaagtgaat ctggatgttg ttaacttga tgttgacctt
 1020
 ttggattaag aggactatca gattaaagca aaatgtaatt ttaattcaat gaagatatca
 1080
 ttaccaggtt actcttgaga tttttcaacg gtgttagaac tctcaacca gacctgaaaa
 1140
 ccaagtatgc aaggtttctg aatctctctg gtagattaac tattgacaat gattttctgt
 1200

tatctttggt caaaaagttc atgtcttctc aaaatatgaa atattgataa atggaagagc
 1260
 atacggtgac aagtctcctt tccaacccca ggttccttac accctgctct cagcaggcag
 1320
 tgagtgtcac acacctgtta atccatcttg agcaggacag tactatacaa atagaatgca
 1380
 agctgtaatg taattttata ttttcttata gccacgttga agtaaaaaca aacaggtaca
 1440
 gtgtttttta ccagctttat agaagtacag ttgttacata tttaatgaat acaatttgat
 1500
 gggcttgact atatgcacac acctttgata ccatcaccac aatcagggtg ataaacatac
 1560
 ctgtcatctc caaaaaaaaa aaaaaaaaaa a
 1591

<210> 3894

<211> 334

<212> PRT

<213> Homo sapiens

<400> 3894

Arg	Val	Leu	Gln	Lys	Leu	Asp	Asp	Asp	Gly	Leu	Pro	Phe	Ile	Gly	Ala
1				5					10					15	
Lys	Leu	Gln	Tyr	Gly	Asp	Pro	Tyr	Tyr	Ser	Tyr	Leu	Asn	Leu	Asn	Thr
		20						25					30		
Gly	Glu	Ser	Phe	Val	Met	Tyr	Tyr	Lys	Ser	Lys	Glu	Asn	Cys	Val	Val
	35						40					45			
Asp	Asn	Ile	Lys	Val	Cys	Ser	Asn	Asp	Thr	Gly	Ser	Gly	Lys	Phe	Lys
	50						55				60				
Cys	Val	Cys	Ile	Thr	Met	Arg	Val	Pro	Arg	Asn	Pro	Thr	Ile	Gly	Asp
65					70					75				80	
Lys	Phe	Ala	Ser	Arg	His	Gly	Gln	Lys	Gly	Ile	Leu	Ser	Arg	Leu	Trp
				85					90					95	
Pro	Ala	Glu	Asp	Met	Pro	Phe	Thr	Glu	Ser	Gly	Met	Val	Pro	Asp	Ile
		100						105					110		
Leu	Phe	Asn	Pro	His	Gly	Phe	Pro	Ser	Arg	Met	Thr	Ile	Gly	Met	Leu
		115					120					125			
Ile	Glu	Ser	Met	Ala	Gly	Lys	Ser	Ala	Ala	Leu	His	Gly	Leu	Cys	His
	130				135						140				
Asp	Ala	Thr	Pro	Phe	Ile	Phe	Ser	Glu	Glu	Asn	Ser	Ala	Leu	Glu	Tyr
145					150					155				160	
Phe	Gly	Glu	Met	Leu	Lys	Ala	Ala	Gly	Tyr	Asn	Phe	Tyr	Gly	Thr	Glu
			165						170					175	
Arg	Leu	Tyr	Ser	Gly	Ile	Ser	Gly	Leu	Glu	Leu	Glu	Ala	Asp	Ile	Phe
		180						185					190		
Ile	Gly	Val	Val	Tyr	Tyr	Gln	Arg	Leu	Arg	His	Met	Val	Ser	Asp	Lys
	195					200						205			
Phe	Gln	Val	Arg	Thr	Thr	Gly	Ala	Arg	Asp	Arg	Val	Thr	Asn	Gln	Pro
	210					215					220				
Ile	Gly	Gly	Arg	Asn	Val	Gln	Gly	Gly	Ile	Arg	Phe	Gly	Glu	Met	Glu
225				230						235				240	
Arg	Asp	Ala	Leu	Leu	Ala	His	Gly	Thr	Ser	Phe	Leu	Leu	His	Asp	Arg
			245						250				255		
Leu	Phe	Asn	Cys	Ser	Asp	Arg	Ser	Val	Ala	His	Val	Cys	Val	Lys	Cys

	260		265		270
Gly Ser	Leu Leu Ser Pro Leu Leu Glu Lys Pro Pro Pro Ser Trp Ser				
	275		280		285
Ala Met Arg Asn Arg Lys Tyr Asn Cys Thr Leu Cys Ser Arg Ser Asp					
	290		295		300
Thr Ile Asp Thr Val Ser Val Pro Tyr Val Phe Arg Tyr Phe Val Ala					
305		310		315	320
Glu Leu Ala Ala Met Asn Ile Lys Val Lys Leu Asp Val Val					
	325		330		

<210> 3895
 <211> 1227
 <212> DNA
 <213> Homo sapiens

<400> 3895
 aagactttgc gagtggtagt ctatgaagaa gaggaagagg atggcaccct gaaacagcac
 60
 aaagaagcca agcgcttcga aatcgctagg tctcaacctg aagacacccc tgaaaacaca
 120
 gtgaggaggc aagagcagcc cagcattgag agtacatctc cgatttcaag aactgatgaa
 180
 attagaaaaa acacctacag aacattggat agcctggagc agaccattaa acagctcgaa
 240
 aatacaatca gtgaaatgag tcccaaagcc ctagttagata cctcatgttc ttccaacaga
 300
 gattctgttg caagttcatc ccacatagcc caagaggcct ctccccgacc cttgctagtt
 360
 ccggatgaag gtcccactgc cctagagccc cctacgtcga taccttcagc ttcacgtaag
 420
 ggctccagcg gggccccaca gacgagcagg atgcctgtcc ccatgagtgc caagaacaga
 480
 cccggaaccc tggacaaacc cggaagcag tccaaactgc aggatecccc ccaatatcgt
 540
 caggctaata gaagtgttaa gaaatctggt ggggacttta agcctacttc cccctcctta
 600
 cctgcttcta agattccagc cctttctccc agctctggga aaagcagttc tctgcccctc
 660
 tctagtgggt acagctctaa cctccctaata ccacctgcta ctaaaccatc gattgcttct
 720
 aacctctca gccccaaac aggaccacct gctcactctg cctccctcat ccttctgtc
 780
 tctaattggc ctttgaagtt tcagagcctc actcatacag gtaaaggta ccatctttca
 840
 ttctcaccgc agagtcaaaa tggccgagca cccctcctt tgtcattttc ctccctccct
 900
 ccttctcctg cctcctccgt ctactgaat caaggtgcc aaggcaccag gaccatccat
 960
 actccagcc tcaccagcta caaggcacag aatggaagtt caagcaaagc caccatcc
 1020
 acagcaaaag aaacctctta aaggtaaat cctattagga acaagtcgga gttacattta
 1080
 aaaaaaatta acagtctaca acaactgttt tcacaagaga atgtaacata ttgctgtatc
 1140

gtttgaggct taatgctaaa tatgtgctaa atactggatt aatagatttc agtaaagctc
1200

gttcaaaaaa aaaaaaaaaa aaaaaaa
1227

<210> 3896

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3896

Lys	Thr	Leu	Arg	Val	Val	Val	Tyr	Glu	Glu	Glu	Glu	Glu	Asp	Gly	Thr
1				5					10					15	
Leu	Lys	Gln	His	Lys	Glu	Ala	Lys	Arg	Phe	Glu	Ile	Ala	Arg	Ser	Gln
		20						25					30		
Pro	Glu	Asp	Thr	Pro	Glu	Asn	Thr	Val	Arg	Arg	Gln	Glu	Gln	Pro	Ser
		35					40					45			
Ile	Glu	Ser	Thr	Ser	Pro	Ile	Ser	Arg	Thr	Asp	Glu	Ile	Arg	Lys	Asn
	50						55				60				
Thr	Tyr	Arg	Thr	Leu	Asp	Ser	Leu	Glu	Gln	Thr	Ile	Lys	Gln	Leu	Glu
65				70					75					80	
Asn	Thr	Ile	Ser	Glu	Met	Ser	Pro	Lys	Ala	Leu	Val	Asp	Thr	Ser	Cys
			85						90					95	
Ser	Ser	Asn	Arg	Asp	Ser	Val	Ala	Ser	Ser	Ser	His	Ile	Ala	Gln	Glu
		100						105					110		
Ala	Ser	Pro	Arg	Pro	Leu	Leu	Val	Pro	Asp	Glu	Gly	Pro	Thr	Ala	Leu
		115					120					125			
Glu	Pro	Pro	Thr	Ser	Ile	Pro	Ser	Ala	Ser	Arg	Lys	Gly	Ser	Ser	Gly
	130					135					140				
Ala	Pro	Gln	Thr	Ser	Arg	Met	Pro	Val	Pro	Met	Ser	Ala	Lys	Asn	Arg
145				150						155				160	
Pro	Gly	Thr	Leu	Asp	Lys	Pro	Gly	Lys	Gln	Ser	Lys	Leu	Gln	Asp	Pro
			165						170					175	
Arg	Gln	Tyr	Arg	Gln	Ala	Asn	Gly	Ser	Ala	Lys	Lys	Ser	Gly	Gly	Asp
		180					185						190		
Phe	Lys	Pro	Thr	Ser	Pro	Ser	Leu	Pro	Ala	Ser	Lys	Ile	Pro	Ala	Leu
	195						200					205			
Ser	Pro	Ser	Ser	Gly	Lys	Ser	Ser	Ser	Leu	Pro	Ser	Ser	Ser	Gly	Asp
	210					215					220				
Ser	Ser	Asn	Leu	Pro	Asn	Pro	Pro	Ala	Thr	Lys	Pro	Ser	Ile	Ala	Ser
225				230						235				240	
Asn	Pro	Leu	Ser	Pro	Gln	Thr	Gly	Pro	Pro	Ala	His	Ser	Ala	Ser	Leu
			245							250				255	
Ile	Pro	Ser	Val	Ser	Asn	Gly	Ser	Leu	Lys	Phe	Gln	Ser	Leu	Thr	His
			260					265					270		
Thr	Gly	Lys	Gly	His	His	Leu	Ser	Phe	Ser	Pro	Gln	Ser	Gln	Asn	Gly
	275						280					285			
Arg	Ala	Pro	Pro	Pro	Leu	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Pro	Ala
	290					295					300				
Ser	Ser	Val	Ser	Leu	Asn	Gln	Gly	Ala	Lys	Gly	Thr	Arg	Thr	Ile	His
305				310						315				320	
Thr	Pro	Ser	Leu	Thr	Ser	Tyr	Lys	Ala	Gln	Asn	Gly	Ser	Ser	Ser	Lys
			325							330				335	
Ala	Thr	Pro	Ser	Thr	Ala	Lys	Glu	Thr	Ser						

340

345

<210> 3897
 <211> 366
 <212> DNA
 <213> Homo sapiens

<400> 3897
 gccctgtggg ccgggtccaga ccagggtgag gcatggagga ggctctgcac agccatttgc
 60
 agctcagcca gcaccgggtg atggcagga ggctgggct tctgcaactgg cttctggcct
 120
 cttctgggca cccacgcttt gtccatgaat ggaaagcaat gctgacggct gcccaatgtg
 180
 tccaggacgt ttctgaaact cctgttcctc tccccgtccc tctctctgtc ccactgtcca
 240
 cctcagtga ctcctctctt cgtggctctc accccacact ctgccactgc cacattttcc
 300
 tctgcgcccc gcctctgcct ccacctgaaa ctttcctgga aatctcaaaa tgtaattcca
 360
 ggtecc
 366

<210> 3898
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 3898
 Met Glu Glu Ala Leu His Ser His Leu Gln Leu Ser Gln His Arg Val
 1 5 10 15
 Met Ala Gly Arg Pro Gly Leu Leu His Trp Leu Leu Ala Ser Ser Gly
 20 25 30
 His Pro Arg Phe Val His Glu Trp Lys Ala Met Leu Thr Ala Ala Gln
 35 40 45
 Cys Val Gln Asp Val Ser Glu Thr Pro Val Pro Leu Pro Val Pro Leu
 50 55 60
 Ser Val Pro Leu Ser Thr Ser Val Thr Ser Ser Leu Arg Gly Ser His
 65 70 75 80
 Pro Thr Leu Cys His Cys His Ile Phe Leu Cys Ala Gln Pro Leu Pro
 85 90 95
 Pro Pro Glu Thr Phe Leu Glu Ile Ser Lys Cys Asn Ser Arg Ser
 100 105 110

<210> 3899
 <211> 1092
 <212> DNA
 <213> Homo sapiens

<400> 3899
 ngaaacggta accagccctg ggaagcccg c aagaggcctc agcgggtggcc gtccgagcgc
 60
 cgagaggtga ggggtgcccc gcctcacctg cagagggggc gttccgggct cgaaccgggc
 120

accttccgga aaatggcggc tgccaggccc agcctgggcc gagtcctccc aggatecctct
 180
 gtccctgttcc tgtgtgacat gcaggagaag ttccgccaca acatcgcta cttccacag
 240
 atcgtctcag tggctgccc catgetcaag gtggcccgcc tgcttgaggt gccagtcag
 300
 ctgacggagc agtaccaca aggcctgggc cccacggtgc ccgagctggg gactngaggg
 360
 ccttcggccg ctggccaaga cctgcttcag catggtgctt gcctgcagca ggagctggac
 420
 agtcggcccc agtcgcgctc tgtgctgctc tgtggcattg aggcacaggc ctgcatcttg
 480
 aacacgaccc tggacctcct agaccggggg ctgcaggtcc atgtggtggt ggacgcctgc
 540
 tcctcacgca gccaggtgga ccggtggtg gctctggccc gcatgagaca gactggtgcc
 600
 ttctctcca ccagcgaagg gctcattctg cagcttggtg gcgatgccgt ccacccccag
 660
 ttcaaggaga tccagaaact catcaaggag cccgccccag acagcggact gctgggcctc
 720
 ttccaaggcc agaactccct cctccactga actccaaccc tgccttgagg gaagaccacc
 780
 ctctgtcac ccggacctca gtggaagccc gtcccccca tcctggatc ccaagagtgg
 840
 tgcgatccac caggagtgcc gcccccttgt gggggggggc aggtgctgc cttcccattg
 900
 gacagctgct cccggaatg caaatgagac tcctggaaac tgggtgggaa ttggtgagc
 960
 caagatggag gcggggctcg gcccggggc acttcacggg gcgggaaggg gaggggaaga
 1020
 agagtctcag actgtgggac acggactcgc agaataaaca tatatgtggc tgtgaaaaaa
 1080
 aaaaaaaaaa aa
 1092

<210> 3900

<211> 249

<212> PRT

<213> Homo sapiens

<400> 3900

Xaa Asn Gly Asn Gln Pro Trp Glu Ala Arg Lys Arg Pro Gln Arg Trp
 1 5 10 15
 Pro Ser Glu Arg Arg Glu Val Arg Val Pro Pro Pro His Leu Gln Arg
 20 25 30
 Gly Arg Ser Gly Leu Glu Pro Gly Thr Phe Arg Lys Met Ala Ala Ala
 35 40 45
 Arg Pro Ser Leu Gly Arg Val Leu Pro Gly Ser Ser Val Leu Phe Leu
 50 55 60
 Cys Asp Met Gln Glu Lys Phe Arg His Asn Ile Ala Tyr Phe Pro Gln
 65 70 75 80
 Ile Val Ser Val Ala Ala Arg Met Leu Lys Val Ala Arg Leu Leu Glu
 85 90 95
 Val Pro Val Met Leu Thr Glu Gln Tyr Pro Gln Gly Leu Gly Pro Thr

```

      100              105              110
Val Pro Glu Leu Gly Thr Xaa Gly Pro Ser Ala Ala Gly Gln Asp Leu
      115              120              125
Leu Gln His Gly Ala Cys Leu Gln Gln Glu Leu Asp Ser Arg Pro Gln
      130              135              140
Leu Arg Ser Val Leu Leu Cys Gly Ile Glu Ala Gln Ala Cys Ile Leu
      145              150              155              160
Asn Thr Thr Leu Asp Leu Leu Asp Arg Gly Leu Gln Val His Val Val
      165              170              175
Val Asp Ala Cys Ser Ser Arg Ser Gln Val Asp Arg Leu Val Ala Leu
      180              185              190
Ala Arg Met Arg Gln Ser Gly Ala Phe Leu Ser Thr Ser Glu Gly Leu
      195              200              205
Ile Leu Gln Leu Val Gly Asp Ala Val His Pro Gln Phe Lys Glu Ile
      210              215              220
Gln Lys Leu Ile Lys Glu Pro Ala Pro Asp Ser Gly Leu Leu Gly Leu
      225              230              235              240
Phe Gln Gly Gln Asn Ser Leu Leu His
      245

```

<210> 3901

<211> 1287

<212> DNA

<213> Homo sapiens

<400> 3901

```

mncctagggg aggtgggagg ggagctgggg acagatggcc ttggtttggg agcatagcct
60
ctgatcagca tctctgtgtt tggacagaac ctgctggggac tacagaacat cccagggcgg
120
ttcttctctgc aggtgtacca caccttcctc aggattgcag agaccagggg aggtgacgcc
180
gtcctggggg tggctctgcat gctgctgctg ctggtgctga agctgatgag ggaccacgtg
240
cctcccgtcc accccgagat gccccctggt gtgcggtcca gccgtgggct ggtctgggct
300
gccacgacag ctgcaacgc cctggtgggc tcttcgcag ccctggttgc gtactccttc
360
gaggtgactg gataccagcc ttctatccta acaggggaga cagctgaggg gctccctcca
420
gtccggatcc cgcccttctc agtgaccaca gccaacggga cgatctcctt caccgagatg
480
gtgcaggaca tgggagccgg gctggccgtg gtgcccctga tgggcctcct ggagagcatt
540
gcggtggcca aagccttcgc atctcagaat aattaccgca tcgatgcaa ccaggagctg
600
ctggccatcg gtctaccaa catgttgggc tccctcgtct cctcctacce ggtcacaggc
660
agctttggac ggacagccgt gaacgctcag tcgggggtgt gcaccccggc ggggggcctg
720
gtgacgggag tgctggtgct gctgtctctg gactacctga cctcactgtt ctactacatc
780
cccaagtctg ccctggctgc cgtcacatc atggccgtgg ccccgctgtt cgacaccaag
840

```

atcttcagga cgctctggcg tgtaagagg ctggacctgc tgccctgtg cgtgaccttc
 900
 ctgctgtgct tctgggaggt gcagtacggc atcctggccg gggccctggt gtctctgctc
 960
 atgctcctgc actctgcagc caggcctgag accaagggtg cagagggggc ggttctggtc
 1020
 ctgcagccgg ccagcggcct gtccttcctt gtcctctgcc cccactccc tgcgtttcag
 1080
 gaccccaaga ccctgtcccc gacgctctcc agtccacaag gatgcaggca tctctgagtg
 1140
 ggctggaccg tcctctgtgg gcctcagcca gtggtgctgc agcaaggggtg gtggctcccc
 1200
 acatatcact ccttcctgc ccctaaagtc cggttcctgt ttctgggggg ttgatttttag
 1260
 gggagctaag ggctgtgag tcctagt
 1287

<210> 3902

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3902

Met	Leu	Leu	Leu	Val	Leu	Lys	Leu	Met	Arg	Asp	His	Val	Pro	Pro
1			5					10					15	
Val	His	Pro	Glu	Met	Pro	Pro	Gly	Val	Arg	Leu	Ser	Arg	Gly	Leu
			20					25					30	Val
Trp	Ala	Ala	Thr	Thr	Ala	Arg	Asn	Ala	Leu	Val	Val	Ser	Phe	Ala
			35				40					45		Ala
Leu	Val	Ala	Tyr	Ser	Phe	Glu	Val	Thr	Gly	Tyr	Gln	Pro	Phe	Ile
			50			55					60			Leu
Thr	Gly	Glu	Thr	Ala	Glu	Gly	Leu	Pro	Pro	Val	Arg	Ile	Pro	Pro
65					70					75				80
Ser	Val	Thr	Thr	Ala	Asn	Gly	Thr	Ile	Ser	Phe	Thr	Glu	Met	Val
				85					90				95	Gln
Asp	Met	Gly	Ala	Gly	Leu	Ala	Val	Val	Pro	Leu	Met	Gly	Leu	Leu
			100				105						110	Glu
Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe	Ala	Ser	Gln	Asn	Asn	Tyr	Arg
			115				120					125		Ile
Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Leu	Thr	Asn	Met	Leu
			130			135					140			Gly
Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val	Thr	Gly	Ser	Phe	Gly	Arg	Thr
145					150					155				160
Val	Asn	Ala	Gln	Ser	Gly	Val	Cys	Thr	Pro	Ala	Gly	Gly	Leu	Val
			165						170				175	Thr
Gly	Val	Leu	Val	Leu	Leu	Ser	Leu	Asp	Tyr	Leu	Thr	Ser	Leu	Phe
			180				185						190	Tyr
Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala	Ala	Val	Ile	Ile	Met	Ala	Val
			195				200					205		Ala
Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe	Arg	Thr	Leu	Trp	Arg	Val	Lys
			210			215					220			Arg
Leu	Asp	Leu	Leu	Pro	Leu	Cys	Val	Thr	Phe	Leu	Leu	Cys	Phe	Trp
225					230					235				240
Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly	Ala	Leu	Val	Ser	Leu	Leu	Met
														Leu

```

                245                250                255
Leu His Ser Ala Ala Arg Pro Glu Thr Lys Val Ser Glu Gly Pro Val
                260                265                270
Leu Val Leu Gln Pro Ala Ser Gly Leu Ser Phe Pro Val Leu Cys Pro
                275                280                285
Pro Leu Pro Ala Val Gln Asp Pro Lys Thr Leu Ser Pro Thr Leu Ser
                290                295                300
Ser Pro Gln Gly Cys Arg His Leu
305                310

```

<210> 3903

<211> 598

<212> DNA

<213> Homo sapiens

<400> 3903

```

gcgcgcgcgg gagcgcgcgt ggtgctggcc tgccgcagcc aggagcgcgg ggaggcggct
60
gccttcgacc tccgccagga gagtgggaac aatgaggtca tttcatggc cttggacttg
120
gccagtctgg cctcggtgcg ggcccttgcc actgccttgc tgagctctga gccacggttg
180
gacatcctca tccacaatgc cggatcagc tcctgtggcc ggaccctga ggcgtttaac
240
ctgctgcttc ggggaacca tatcggtccc tttctgctga cacatctgct gctgccttgc
300
ctgaaggcat gtgccctag ccgcgtggtg gtggtagcct cagctgccca ctgtcgggga
360
cgtcttgact tcaaacgcct ggaccgccca gtggtgctgg cggcaggagc tgcggcatat
420
gctgacacta agctggctaa tgtactgttt gcccgggagc tcgccaacca gcttgaggcc
480
actggcgtea cctgctatgc agccaccca gggcctgtga actcggagct gttcctgcgc
540
catgttcctg gatggctgcg cccacttttg cggccattgg cttggctggt gccccggg
598

```

<210> 3904

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3904

```

Ala Arg Arg Gly Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg
1      5      10      15
Gly Glu Ala Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu
20     25     30
Val Ile Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala
35     40     45
Phe Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile
50     55     60
His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe Asn
65     70     75     80
Leu Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr His Leu

```

85 90 95
 Leu Leu Pro Cys Leu Lys Ala Cys Ala Pro Ser Arg Val Val Val Val
 100 105 110
 Ala Ser Ala Ala His Cys Arg Gly Arg Leu Asp Phe Lys Arg Leu Asp
 115 120 125
 Arg Pro Val Val Leu Ala Ala Gly Ala Ala Ala Tyr Ala Asp Thr Lys
 130 135 140
 Leu Ala Asn Val Leu Phe Ala Arg Glu Leu Ala Asn Gln Leu Glu Ala
 145 150 155 160
 Thr Gly Val Thr Cys Tyr Ala Ala His Pro Gly Pro Val Asn Ser Glu
 165 170 175
 Leu Phe Leu Arg His Val Pro Gly Trp Leu Arg Pro Leu Leu Arg Pro
 180 185 190
 Leu Ala Trp Leu Val Pro Arg
 195

<210> 3905
 <211> 370
 <212> DNA
 <213> Homo sapiens

<400> 3905
 ggatcctctg agctgogctc ggccttctcg gcggcacgca ccacccccct ggagggcacg
 60
 tcggagatgg cggtagacctt cgacaagggtg tacgtgaaca tcgggggcca cttcgatgtg
 120
 gccaccggcc agtttcgctg ccgcgtgccc ggcgcctact tcttctcctt cacggtggc
 180
 aaggccccgc acaagagccc gtcggtgatg ctggtgcaa accgcgacga ggtgcaggcg
 240
 ctggccttcg acgagcagcg gcggccaggc gcgcggcgcg cagccagcca gagcgccatg
 300
 ctgcagctcg actacggcga cacagtgtgg ctgcggctgc atggcgcccc gcagtacgcg
 360
 ctaggcgcgc
 370

<210> 3906
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 3906
 Gly Ser Ser Glu Leu Arg Ser Ala Phe Ser Ala Ala Arg Thr Thr Pro
 1 5 10 15
 Leu Glu Gly Thr Ser Glu Met Ala Val Thr Phe Asp Lys Val Tyr Val
 20 25 30
 Asn Ile Gly Gly Asp Phe Asp Val Ala Thr Gly Gln Phe Arg Cys Arg
 35 40 45
 Val Pro Gly Ala Tyr Phe Phe Ser Phe Thr Ala Gly Lys Ala Pro His
 50 55 60
 Lys Ser Pro Ser Val Met Leu Val Arg Asn Arg Asp Glu Val Gln Ala
 65 70 75 80
 Leu Ala Phe Asp Glu Gln Arg Arg Pro Gly Ala Arg Arg Ala Ala Ser

	85		90		95
Gln Ser Ala Met Leu Gln Leu Asp Tyr Gly Asp Thr Val Trp Leu Arg					
	100		105		110
Leu His Gly Ala Pro Gln Tyr Ala Leu Gly Ala					
	115		120		

<210> 3907

<211> 4474

<212> DNA

<213> Homo sapiens

<400> 3907

gcgcgccgga accggaaccg acctgcgccg gaaccggaac ggagagcggg ttgccagggc
 60
 ccgaagaggg ctggctgcgg cggctctcgt cggtgtccg ttccttgctg gagaatttgg
 120
 ccacaaagag ctgccaaagat agctgggcca ggaagaaagc gccgcagccc tgaccagac
 180
 gctgttgccg accccggggc actctggctg tgcaccaagc ggctcaagat gtctggcggg
 240
 gccagtgcga caggcccaag gagagggccc ccaggactgg aggacaccac tagtaagaag
 300
 aagcagaagg atcgagcaaa ccaggagagc aaggatggag atcctaggaa agagacaggg
 360
 tctcgatatg ttgccaggc tgggtctttaa cctctggcct caggatgatcc ttctgcctca
 420
 gcctcccatg cagctgggat cacaggctca cgccaccgta cccggctgtt ctttccttca
 480
 tcgtcagggc cagcatccac tcctcaagag gacgagacca aagagggagc ttgtgaagac
 540
 cctcatgatc tcttggttac tcccactcca gagggtgtgc tcgattggag gcagagtgca
 600
 gaagaggtga ttgtcaagct tcgtgtggga gtaggtcccc tgcagctgga ggatgtagat
 660
 gctgctttca cagatacaga ctgtgtggtg cggtttgag gtggtcagca gtgggggtgtg
 720
 gtcttctatg ctgagataaa aagctcttgt gctaaagtgc aaaccgcga gggcagcttc
 780
 ctgcacctga cactgcccga aaagggtgcct atgtcacgt ggccctccct cctggttgag
 840
 gctgatgaac agctttgcat accaccgctg aactcccaaa cctgcctcct gggctcagag
 900
 gagaatttag cccctttggc aggagagaaa gcagtgcctc ccgggaatga ccagctctct
 960
 ccagccatgg tccggagcag aaaccctggg aaagatgact gtgccaagga ggagatggca
 1020
 gtggcagcag atgctgcaac cttggtggat ggtaaagagc ccgagtcgat ggtgaacctg
 1080
 gcgtttgtca agaagactc gtatgagaag ggcccggatt cagtgggtgt gcacgtgtac
 1140
 gtgaaggaga tctgcaggga cacctcaaga gtacttttcc gtgagcagga cttcacgctc
 1200
 atcttcaga ccagggatgg aaacttcctg aggctgcacc cgggtgtgtg gccccacacc
 1260

accttccgtt ggcaggtgaa gctcaggaat ctgattgagc cagagcagtg caccttctgt
1320
ttcacggctt ctgcgcatcga catctgcctt cgtaagaggc agagtcagcg ctgggggggc
1380
ctggaggccc cggtgcacg agtgggtggt gcaaagggtg ccgtgccgac aggtccaacc
1440
cctctggatt caacccccacc aggaggtgct cccaccccc tgacaggcca ggaggaggcc
1500
cgggctgtgg agaaggataa atccaaggca cgatctgagg acacagggt agacagtgtg
1560
gcaaccgcga caccatgga gcatgtaacc ccaaagccag agacacacct ggcctcgccc
1620
aagcctacat gcatgggtgcc tcccatgccc cacagcccag ttagtgagaga cagcgtggag
1680
gaggaggaag aggaagagaa gaagggtgtg ctgccaggct tcaactggcct tgtcaattta
1740
ggcaaacctt gcttcagaa cagcgtcatt cagtctctgt ccaacactcg ggaactccgg
1800
gacttcttcc atgaccgctc ctttgaggct gagatcaact acaacaaccc actagggact
1860
gggtggcgctc tggccattgg ctttgccgtg ctgcttcggg cgctgtggaa gggcaccac
1920
catgccttcc agccttccaa gttgaaggcc attgtggcga gtaaggccag ccagttcaca
1980
ggctatgcac agcatgatgc ccaggagtgc atggctttcc tgctggatgg gctgcacgag
2040
gacctgaatc gcatcagaa caagccctac acagagaccg tggattcaga tgggcggccc
2100
gatgaggtgg tagctgagga agcatggcag cggcacaaga tgaggaatga ctctttcatc
2160
gtggacctat ttcaggggca gtacaagtcg aagctggtgt gccctgtgtg tgccaaggtc
2220
tccatcactt ttgacccgtt tctttatctg ccggtgccct tgccacaaaa gcaaaagggt
2280
ctccctgtct tttattttgc ccgagagccc cacagcaagc ccatcaagtt cctggtgagc
2340
gtcagcaagg agaactccac tgcgagcgaa gtattggact ccctctctca gagtgttcat
2400
gtgaagcctg agaacctgcg tttggcggag gtaattaaga atcgttttca tcgtgtgttc
2460
ctaccctccc actcactgga cactgtgtcc ccactcgata cgctcctctg ctttgagctg
2520
ctatcctcag agttggctaa ggagcgggta gtggtgctag aggtgcaaca gcgccccag
2580
tgcccagcg tccccatctc caagtgtgca gcctgccagc ggaagcaaca gtcggaggat
2640
gaaaagctga agcgctgtac ccggtgctac cgtgtgggct actgcaacca gctctgccag
2700
aaaaccact ggcctgacca caagggcctc tgccgacctg agaacattgg ctacccttc
2760
ctggtcagtg tacctgcctc acgcctcact tatgcccgcc tcgctcagtt gctagagggc
2820
tatgcccggt actctgtgag tgtattccag ccacccttcc aaccaggccg catggccttg
2880

gagtctcaga gccctggctg caccacactg ctctccacag gttccctgga ggctggggac
2940
agcgagagag accccattca gccacctgag ctccagctgg tgaccctat ggctgagggg
3000
gacacagggc tccccgggt gtgggcagcc cctgaccggg gtctgtgcc cagcaccagt
3060
ggaatttctt ctgagatgct ggccagtggg ccattgagg ttggtcctt gccagctggc
3120
gagagggtgt cccgaccoga agctgctgtg cctgggtacc agcatccaag tgaagctatg
3180
aatgccaca caccaggtt ctcatctat aaaattgatt catccaaccg agagcagcgg
3240
ctaggagaca aaggagacac cccactggag ctgggtgacg actgtagcct ggctctcgtc
3300
tgccggaaca atgagcgctt gcaggagttt gtgttgtag cctccaagga gctggaatgt
3360
gctgaggatc caggctctgc cggtaggct gcccgggccg gccacttcac cctggaccag
3420
tgccctcaacc tcttcacacg gcctgaggtg ctggcaccg agggggcctg gtactgcca
3480
cagtgc aaac agcaccgtga ggccccaag cagctgttg tatgggcct gccaaatgtt
3540
ctcatcgtgc agctcaagcg cttctcctt cgtagtttta tctggcgtga caagatcaat
3600
gacttggtgg agttccctgt taggaacctg gacctgagca agttctgcat tggtcagaaa
3660
gaggagcagc tgcccagcta cgatctatat gctgtcatca accactatgg aggcattgatt
3720
gggtggccact acactgcctg tgcacgcctg cccaatgatc gtagcagtca gcgcagtgc
3780
gtgggctggc gcttgtttga tgacagcaca gtgacaacgg tagacgagag ccaggttgtg
3840
acgcgttatg cctatgtact cttctaccg cgccggaact ctctgtgga gaggccccc
3900
agggcaggtc actctgagca ccaccagac ctaggccctg cagctgaggc tgctgccagc
3960
caggcttccc ggatttgga ggagctggag gctgaggagg agccggtgcc tgaggggtct
4020
gggcccctgg gtccctgggg gcccgaagac tgggtgggccc cctaccacg tggccctacc
4080
acaccagatg agggctgcct ccggtacttt gtccctggga ccgtggcggc tttggtggcc
4140
ctcgtgtca acgtgttcta tcctctggta tcccagagtc gctggagatg agctcgctg
4200
caggcagctg ctgtgagctg gcctacctgc ctgcccagg ccattgcctgc cttgtgtgtg
4260
gggaacacct ctgggctttg ggcctcagct tatgcatctg gtgggagagg gtggggaggt
4320
tgtggccct gcaggggcag agtatcctag ggtgtgtatc catctggctg tctgtccatt
4380
catcctgctg ctctgacctg tggcctcagg cttggccctg cccaagctac ttctgtact
4440
taaaagtgtt aataaaacca gactattcag gccc
4474

<210> 3908
 <211> 1373
 <212> PRT
 <213> Homo sapiens

<400> 3908

```

Ala Gly Cys Gly Gly Leu Ala Arg Leu Ser Val Pro Cys Trp Arg Ile
 1           5           10           15
Trp Pro Gln Arg Ala Ala Lys Ile Ala Gly Pro Gly Arg Lys Arg Arg
      20           25           30
Ser Pro Asp Pro Asp Ala Val Ala Asp Pro Gly Ala Leu Trp Leu Ser
      35           40           45
Thr Lys Arg Leu Lys Met Ser Gly Gly Ala Ser Ala Thr Gly Pro Arg
      50           55           60
Arg Gly Pro Pro Gly Leu Glu Asp Thr Thr Ser Lys Lys Lys Gln Lys
      65           70           75           80
Asp Arg Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr
      85           90           95
Gly Ser Arg Tyr Val Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly
      100          105          110
Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg
      115          120          125
His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr
      130          135          140
Pro Gln Glu Glu Gln Thr Lys Glu Gly Ala Cys Glu Asp Pro His Asp
      145          150          155          160
Leu Leu Ala Thr Pro Thr Pro Glu Leu Leu Leu Asp Trp Arg Gln Ser
      165          170          175
Ala Glu Glu Val Ile Val Lys Leu Arg Val Gly Val Gly Pro Leu Gln
      180          185          190
Leu Glu Asp Val Asp Ala Ala Phe Thr Asp Thr Asp Cys Val Val Arg
      195          200          205
Phe Ala Gly Gly Gln Gln Trp Gly Gly Val Phe Tyr Ala Glu Ile Lys
      210          215          220
Ser Ser Cys Ala Lys Val Gln Thr Arg Lys Gly Ser Leu Leu His Leu
      225          230          235          240
Thr Leu Pro Lys Lys Val Pro Met Leu Thr Trp Pro Ser Leu Leu Val
      245          250          255
Glu Ala Asp Glu Gln Leu Cys Ile Pro Pro Leu Asn Ser Gln Thr Cys
      260          265          270
Leu Leu Gly Ser Glu Glu Asn Leu Ala Pro Leu Ala Gly Glu Lys Ala
      275          280          285
Val Pro Pro Gly Asn Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg
      290          295          300
Asn Pro Gly Lys Asp Asp Cys Ala Lys Glu Glu Met Ala Val Ala Ala
      305          310          315          320
Asp Ala Ala Thr Leu Val Asp Gly Lys Glu Pro Glu Ser Met Val Asn
      325          330          335
Leu Ala Phe Val Lys Asn Asp Ser Tyr Glu Lys Gly Pro Asp Ser Val
      340          345          350
Val Val His Val Tyr Val Lys Glu Ile Cys Arg Asp Thr Ser Arg Val
      355          360          365
Leu Phe Arg Glu Gln Asp Phe Thr Leu Ile Phe Gln Thr Arg Asp Gly

```

370		375		380
Asn Phe Leu Arg Leu His Pro Gly Cys Gly Pro His Thr Thr Phe Arg				
385		390		395
Trp Gln Val Lys Leu Arg Asn Leu Ile Glu Pro Glu Gln Cys Thr Phe				400
	405		410	415
Cys Phe Thr Ala Ser Arg Ile Asp Ile Cys Leu Arg Lys Arg Gln Ser				
	420		425	430
Gln Arg Trp Gly Gly Leu Glu Ala Pro Ala Ala Arg Val Gly Gly Ala				
	435		440	445
Lys Val Ala Val Pro Thr Gly Pro Thr Pro Leu Asp Ser Thr Pro Pro				
	450		455	460
Gly Gly Ala Pro His Pro Leu Thr Gly Gln Glu Glu Ala Arg Ala Val				
	465		470	475
Glu Lys Asp Lys Ser Lys Ala Arg Ser Glu Asp Thr Gly Leu Asp Ser				
	485		490	495
Val Ala Thr Arg Thr Pro Met Glu His Val Thr Pro Lys Pro Glu Thr				
	500		505	510
His Leu Ala Ser Pro Lys Pro Thr Cys Met Val Pro Pro Met Pro His				
	515		520	525
Ser Pro Val Ser Gly Asp Ser Val Glu Glu Glu Glu Glu Glu Lys				
	530		535	540
Lys Val Cys Leu Pro Gly Phe Thr Gly Leu Val Asn Leu Gly Asn Thr				
	545		550	555
Cys Phe Met Asn Ser Val Ile Gln Ser Leu Ser Asn Thr Arg Glu Leu				
	565		570	575
Arg Asp Phe Phe His Asp Arg Ser Phe Glu Ala Glu Ile Asn Tyr Asn				
	580		585	590
Asn Pro Leu Gly Thr Gly Gly Arg Leu Ala Ile Gly Phe Ala Val Leu				
	595		600	605
Leu Arg Ala Leu Trp Lys Gly Thr His His Ala Phe Gln Pro Ser Lys				
	610		615	620
Leu Lys Ala Ile Val Ala Ser Lys Ala Ser Gln Phe Thr Gly Tyr Ala				
	625		630	635
Gln His Asp Ala Gln Glu Phe Met Ala Phe Leu Leu Asp Gly Leu His				
	645		650	655
Glu Asp Leu Asn Arg Ile Gln Asn Lys Pro Tyr Thr Glu Thr Val Asp				
	660		665	670
Ser Asp Gly Arg Pro Asp Glu Val Val Ala Glu Glu Ala Trp Gln Arg				
	675		680	685
His Lys Met Arg Asn Asp Ser Phe Ile Val Asp Leu Phe Gln Gly Gln				
	690		695	700
Tyr Lys Ser Lys Leu Val Cys Pro Val Cys Ala Lys Val Ser Ile Thr				
	705		710	715
Phe Asp Pro Phe Leu Tyr Leu Pro Val Pro Leu Pro Gln Lys Gln Lys				
	725		730	735
Val Leu Pro Val Phe Tyr Phe Ala Arg Glu Pro His Ser Lys Pro Ile				
	740		745	750
Lys Phe Leu Val Ser Val Ser Lys Glu Asn Ser Thr Ala Ser Glu Val				
	755		760	765
Leu Asp Ser Leu Ser Gln Ser Val His Val Lys Pro Glu Asn Leu Arg				
	770		775	780
Leu Ala Glu Val Ile Lys Asn Arg Phe His Arg Val Phe Leu Pro Ser				
	785		790	795
His Ser Leu Asp Thr Val Ser Pro Ser Asp Thr Leu Leu Cys Phe Glu				800

										805			810			815		
Leu	Leu	Ser	Ser	Glu	Leu	Ala	Lys	Glu	Arg	Val	Val	Val	Leu	Glu	Val			
				820				825			830							
Gln	Gln	Arg	Pro	Gln	Val	Pro	Ser	Val	Pro	Ile	Ser	Lys	Cys	Ala	Ala			
				835				840			845							
Cys	Gln	Arg	Lys	Gln	Gln	Ser	Glu	Asp	Glu	Lys	Leu	Lys	Arg	Cys	Thr			
				850				855			860							
Arg	Cys	Tyr	Arg	Val	Gly	Tyr	Cys	Asn	Gln	Leu	Cys	Gln	Lys	Thr	His			
				865				870			875			880				
Trp	Pro	Asp	His	Lys	Gly	Leu	Cys	Arg	Pro	Glu	Asn	Ile	Gly	Tyr	Pro			
				885				890			895							
Phe	Leu	Val	Ser	Val	Pro	Ala	Ser	Arg	Leu	Thr	Tyr	Ala	Arg	Leu	Ala			
				900				905			910							
Gln	Leu	Leu	Glu	Gly	Tyr	Ala	Arg	Tyr	Ser	Val	Ser	Val	Phe	Gln	Pro			
				915				920			925							
Pro	Phe	Gln	Pro	Gly	Arg	Met	Ala	Leu	Glu	Ser	Gln	Ser	Pro	Gly	Cys			
				930				935			940							
Thr	Thr	Leu	Leu	Ser	Thr	Gly	Ser	Leu	Glu	Ala	Gly	Asp	Ser	Glu	Arg			
				945				950			955			960				
Asp	Pro	Ile	Gln	Pro	Pro	Glu	Leu	Gln	Leu	Val	Thr	Pro	Met	Ala	Glu			
				965				970			975							
Gly	Asp	Thr	Gly	Leu	Pro	Arg	Val	Trp	Ala	Ala	Pro	Asp	Arg	Gly	Pro			
				980				985			990							
Val	Pro	Ser	Thr	Ser	Gly	Ile	Ser	Ser	Glu	Met	Leu	Ala	Ser	Gly	Pro			
				995				1000			1005							
Ile	Glu	Val	Gly	Ser	Leu	Pro	Ala	Gly	Glu	Arg	Val	Ser	Arg	Pro	Glu			
				1010				1015			1020							
Ala	Ala	Val	Pro	Gly	Tyr	Gln	His	Pro	Ser	Glu	Ala	Met	Asn	Ala	His			
				1025				1030			1035			1040				
Thr	Pro	Gln	Phe	Phe	Ile	Tyr	Lys	Ile	Asp	Ser	Ser	Asn	Arg	Glu	Gln			
				1045				1050			1055							
Arg	Leu	Glu	Asp	Lys	Gly	Asp	Thr	Pro	Leu	Glu	Leu	Gly	Asp	Asp	Cys			
				1060				1065			1070							
Ser	Leu	Ala	Leu	Val	Trp	Arg	Asn	Asn	Glu	Arg	Leu	Gln	Glu	Phe	Val			
				1075				1080			1085							
Leu	Val	Ala	Ser	Lys	Glu	Leu	Glu	Cys	Ala	Glu	Asp	Pro	Gly	Ser	Ala			
				1090				1095			1100							
Gly	Glu	Ala	Ala	Arg	Ala	Gly	His	Phe	Thr	Leu	Asp	Gln	Cys	Leu	Asn			
				1105				1110			1115			1120				
Leu	Phe	Thr	Arg	Pro	Glu	Val	Leu	Ala	Pro	Glu	Glu	Ala	Trp	Tyr	Cys			
				1125				1130			1135							
Pro	Gln	Cys	Lys	Gln	His	Arg	Glu	Ala	Ser	Lys	Gln	Leu	Leu	Leu	Trp			
				1140				1145			1150							
Arg	Leu	Pro	Asn	Val	Leu	Ile	Val	Gln	Leu	Lys	Arg	Phe	Ser	Phe	Arg			
				1155				1160			1165							
Ser	Phe	Ile	Trp	Arg	Asp	Lys</												

1235	1240	1245
Thr Thr Val Asp Glu Ser Gln Val Val Thr Arg Tyr Ala Tyr Val Leu		
1250	1255	1260
Phe Tyr Arg Arg Arg Asn Ser Pro Val Glu Arg Pro Pro Arg Ala Gly		
1265	1270	1275
His Ser Glu His His Pro Asp Leu Gly Pro Ala Ala Glu Ala Ala Ala		1280
	1285	1290
Ser Gln Ala Ser Arg Ile Trp Gln Glu Leu Glu Ala Glu Glu Glu Pro		1295
	1300	1305
Val Pro Glu Gly Ser Gly Pro Leu Gly Pro Trp Gly Pro Gln Asp Trp		1310
	1315	1320
Val Gly Pro Leu Pro Arg Gly Pro Thr Thr Pro Asp Glu Gly Cys Leu		1325
	1330	1335
Arg Tyr Phe Val Leu Gly Thr Val Ala Ala Leu Val Ala Leu Val Leu		1340
1345	1350	1355
Asn Val Phe Tyr Pro Leu Val Ser Gln Ser Arg Trp Arg		1360
	1365	1370

<210> 3909

<211> 2704

<212> DNA

<213> Homo sapiens

<400> 3909

caccctctct ggacactcat catatagtct atttttggcc caacttcttt tgaaagggcc
 60
 cattctttac ctcatttaga taaatcagat aggtctttct tgcttacttc attaacaact
 120
 caattaatta taaccacatc acatgaagat tagatgtaat taggacctgt ccaatgtctt
 180
 tacatcccag tccttctgta ctccaaacct taagcaaatt ggtcgacctc tgtaggtcta
 240
 agtattctgt gtgtaacatg aaagctttga attaggccac gtttccggct aattttttta
 300
 aaagtgtttg tgatcctgtg aattccataa cccaccacct tccttttcca actcttcacc
 360
 ttttaaatcc actttccatc tctccagagg aaagggcatt gagagtagag gaagcaagtc
 420
 cctttcacta aagcagcctg gtttgaaaaa gccggtaatc tctgaactgt ctcttgcttg
 480
 aacaagaaaa actccctctg aaataccttt ttctccttgt gatagcaaca gaaaccaagc
 540
 agcaacagcc cttggaaaga ggctaaattt ttcttgactt ctgcagcaac aaagaccgtg
 600
 aaaagtggc acttctggcc taacgtgccc gtcacctac ccctcacccc agggcaaccc
 660
 aggctggaca tttagtgcct ccctctttat tcctctgtga tcatccagat cagcacttga
 720
 ctgtttattt tcaaacttca cgaacctcac cccaagatct tcacattctg gatctcagct
 780
 gctcttgaag gacagtgaact tgttaccacc gcaacagcag agcctgccat ccccaacaga
 840
 tcaccagtgt tccttgacat cgtgccctac cttgtctccc tttgtggctt cctaaatgcc
 900

catctcgttg gccttggttc ggctagtggg atggaggggt gctgcctagc actgacctga
960
gagtgtgtgt gacccactga cccaatggac atcaaaggcc agttctggaa tgatgacgac
1020
tcggaggag ataatgaatc agaggaattt ctctatggcg ttcaggggag ctgtgcagct
1080
gacctgtatc gacaccacac gcttgatgca gacattgaag cctgaagga gatctacagt
1140
gagaactctg tatccatcag agaatatgga actatcgatg acgtggacat tgacctccac
1200
atcaacatca gcttctcga tgaggaagtc tctacagcct ggaaggctct ccggacagaa
1260
cctattgtgt tgaggctgcg attttctctc tcccagtacc tagatggacc agaaccatcc
1320
attgaggttt tccagccatc aaataaggaa ggatttgggc tgggtcttca gttgaaaaag
1380
atcctgggta tgtttacatc ccaacaatgg aaacatctga gcaatgattt cttgaagacc
1440
cagcaggaga agaggcacag ttggttcaag gcaagtggta ccatcaagaa gttccgagct
1500
ggctcagca tcttttcacc catcccaag tctccagtt tccctatcat acaggactcc
1560
atgctgaaag gcaaaactagg tgtaccagag cttcgggttg ggcgcctcat gaaccgttcc
1620
atctctgta ccatgaataa ccccaaagtg gaagtgttg gctacctcc cagccccag
1680
gtcagtggtc actgcaagaa cattccact ctggagtatg gattcctcgt tcagatcatg
1740
aagtatgcag aacagaggat tccaacattg aatgagtact gtgtggtgtg tgatgagcag
1800
catgtcttcc aaaatggatc tatgctgaag ccagctgtct gtactcgtga actatgcgtt
1860
ttctccttct acacactggg cgtcatgtct ggagctgcag aggaggtggc cactggagca
1920
gaggtggtag atctgctggt ggccatgtgt agggcagctt tagagtcctc tagaaagagc
1980
atcatctttg agccttatcc ctctgtggtg gacccactg atcccaagac tctggccttt
2040
aaccctaaga agaagaatta tgagcggtt cagaaagctc tggatagtgt gatgtctatt
2100
cgggagatga cccagggtc atatttggaa atcaagaaac agatggacaa gttggatccc
2160
ctggcccatc ctctcctgca gtggatcatc tctagcaaca ggtcacacat tgtcaaacta
2220
cctctcagca ggcagctgaa gttcatgcac acctcacacc agttcctcct gctgagcagc
2280
cctcctgcca aggaggctcg gttccggacc gccaaagaagc tctatggcag cacctttgcc
2340
ttccatgggt cccacattga gaactggcat tcgacctgc gcaatgggt ggtcaatgca
2400
tctacacca aactgcagga atgggaaaag gacagcacag gatgccctcc aaggatgagc
2460
tggtccagag atacaacagg atgaatacca tccccagac ccgatccatt cagtccaggt
2520

tcctgcagag tcggaatcta aactgtatag cactttgtga agtgattaca tctaaggacc
 2580
 tccagaagca tgggaacatc tgggtgtgcc ctgtgtccga ccatgtctgc acaagattct
 2640
 tctttgtata tgaggatggg caggtgggcg atgccaacat tattattcgg gtccccaagt
 2700
 taca
 2704

<210> 3910

<211> 499

<212> PRT

<213> Homo sapiens

<400> 3910

Met	Asp	Ile	Lys	Gly	Gln	Phe	Trp	Asn	Asp	Asp	Asp	Ser	Glu	Gly	Asp
1				5					10					15	
Asn	Glu	Ser	Glu	Glu	Phe	Leu	Tyr	Gly	Val	Gln	Gly	Ser	Cys	Ala	Ala
			20					25					30		
Asp	Leu	Tyr	Arg	His	Pro	Gln	Leu	Asp	Ala	Asp	Ile	Glu	Ala	Val	Lys
		35					40					45			
Glu	Ile	Tyr	Ser	Glu	Asn	Ser	Val	Ser	Ile	Arg	Glu	Tyr	Gly	Thr	Ile
	50					55				60					
Asp	Asp	Val	Asp	Ile	Asp	Leu	His	Ile	Asn	Ile	Ser	Phe	Leu	Asp	Glu
65					70					75				80	
Glu	Val	Ser	Thr	Ala	Trp	Lys	Val	Leu	Arg	Thr	Glu	Pro	Ile	Val	Leu
			85					90					95		
Arg	Leu	Arg	Phe	Ser	Leu	Ser	Gln	Tyr	Leu	Asp	Gly	Pro	Glu	Pro	Ser
			100					105					110		
Ile	Glu	Val	Phe	Gln	Pro	Ser	Asn	Lys	Glu	Gly	Phe	Gly	Leu	Gly	Leu
	115						120					125			
Gln	Leu	Lys	Lys	Ile	Leu	Gly	Met	Phe	Thr	Ser	Gln	Gln	Trp	Lys	His
	130					135					140				
Leu	Ser	Asn	Asp	Phe	Leu	Lys	Thr	Gln	Gln	Glu	Lys	Arg	His	Ser	Trp
145					150					155				160	
Phe	Lys	Ala	Ser	Gly	Thr	Ile	Lys	Lys	Phe	Arg	Ala	Gly	Leu	Ser	Ile
			165						170				175		
Phe	Ser	Pro	Ile	Pro	Lys	Ser	Pro	Ser	Phe	Pro	Ile	Ile	Gln	Asp	Ser
			180					185					190		
Met	Leu	Lys	Gly	Lys	Leu	Gly	Val	Pro	Glu	Leu	Arg	Val	Gly	Arg	Leu
	195						200					205			
Met	Asn	Arg	Ser	Ile	Ser	Cys	Thr	Met	Asn	Asn	Pro	Lys	Val	Glu	Val
	210					215					220				
Phe	Gly	Tyr	Pro	Pro	Ser	Pro	Gln	Val	Ser	Gly	His	Cys	Lys	Asn	Ile
225					230					235				240	
Pro	Thr	Leu	Glu	Tyr	Gly	Phe	Leu	Val	Gln	Ile	Met	Lys	Tyr	Ala	Glu
			245						250					255	
Gln	Arg	Ile	Pro	Thr	Leu	Asn	Glu	Tyr	Cys	Val	Val	Cys	Asp	Glu	Gln
			260				265						270		
His	Val	Phe	Gln	Asn	Gly	Ser	Met	Leu	Lys	Pro	Ala	Val	Cys	Thr	Arg
		275					280					285			
Glu	Leu	Cys	Val	Phe	Ser	Phe	Tyr	Thr	Leu	Gly	Val	Met	Ser	Gly	Ala
	290					295					300				
Ala	Glu	Glu	Val	Ala	Thr	Gly	Ala	Glu	Val	Val	Asp	Leu	Leu	Val	Ala

```

305          310          315          320
Met Cys Arg Ala Ala Leu Glu Ser Pro Arg Lys Ser Ile Ile Phe Glu
          325          330          335
Pro Tyr Pro Ser Val Val Asp Pro Thr Asp Pro Lys Thr Leu Ala Phe
          340          345          350
Asn Pro Lys Lys Lys Asn Tyr Glu Arg Leu Gln Lys Ala Leu Asp Ser
          355          360          365
Val Met Ser Ile Arg Glu Met Thr Gln Gly Ser Tyr Leu Glu Ile Lys
          370          375          380
Lys Gln Met Asp Lys Leu Asp Pro Leu Ala His Pro Leu Leu Gln Trp
385          390          395          400
Ile Ile Ser Ser Asn Arg Ser His Ile Val Lys Leu Pro Leu Ser Arg
          405          410          415
Gln Leu Lys Phe Met His Thr Ser His Gln Phe Leu Leu Ser Ser
          420          425          430
Pro Pro Ala Lys Glu Ala Arg Phe Arg Thr Ala Lys Lys Leu Tyr Gly
          435          440          445
Ser Thr Phe Ala Phe His Gly Ser His Ile Glu Asn Trp His Ser Ile
          450          455          460
Leu Arg Asn Gly Leu Val Asn Ala Ser Tyr Thr Lys Leu Gln Glu Trp
465          470          475          480
Glu Lys Asp Ser Thr Gly Cys Pro Pro Arg Met Ser Trp Ser Arg Asp
          485          490          495
Thr Thr Gly

```

```

<210> 3911
<211> 9121
<212> DNA
<213> Homo sapiens

```

```

<400> 3911
nnggatgtgg tgagccctct tgactatgag acgaccaagg agtacaccct acgggtgcca
60
gcacaggatg gtggccgtcc ccactctct aatgtctctg gcttggtgac agtacaggtc
120
ctggatatca acgacaatgc cccatcttc gtcagcacc cttccaggc tactgtcctg
180
gagagcgtec ccttaggcta cctggtctc catgtccagg ctatcgacgc tgatgctggt
240
gacaatgccc gcctggaata ccgccttgct ggggtgggac atgacttccc cttcaccatc
300
aacaatggca caggctggat ctctgtggct gctgaactgg accgggagga agttgatttc
360
tacagctttg gggtagaagc tcgagaccat ggcactccag cactcactgc ctcggccagt
420
gtcagcgtga ctgtcctgga tgtcaacgac aacaatecaa cctttacce accagagtac
480
acagtgcggc tcaatgagga tgcagctgtg ggcaccagcg tggtagcggg gtcagctgtg
540
gaccgtgatg ctcatagtgt catcacctac cagatcacca gtggcaatac tcgaaaccgc
600
tttccatca ccagccaaag tgggtgtggg ctggtatccc ttgccctgcc actggactac
660

```

aaacttgagc ggcagtatgt gttggctgtt accgcctccg atggcactcg gcaggacacg
720
gcacagattg tggatgaatgt caccgacgcc aacacccatc gtcctgtctt tcagagctcc
780
cactatacag tgaatgttaa tgaggaccgg ccggcaggca ccacgggtgt gctgatcagc
840
gccacggatg aggacacagg tgagaatgcc cgcacacct acttcatgga ggacagcatc
900
ccccagttcc gcatcgatgc agacacgggg gctgtcacca cccaggctga gctggactac
960
gaagaccaag tgtcttacac cctggccatt actgctcggg acaatggcat tccccagaag
1020
tccgacacca cctacctgga gatcctggtg aacgacgtga atgacaatgc ccctcagttc
1080
ctgcgagact cctaccaggg cagtgtctat gaggatgtgc cacccttcac tagcgtcctg
1140
cagatctcag ccactgatcg tgattctgga cttaatggca gggctctcta caccttccaa
1200
ggaggcgacg atggagacgg tgactttatt gttgagtcca cgtcaggcat cgtgcgaacg
1260
ctacggaggc tggatcgaga gaacgtggcc cagtatgtct tgcgggcata tgcagtggac
1320
aaggggatgc cccagcccg cacacctatg gaagtacag tactgtgtt ggatgtgaat
1380
gacaatcccc ctgtctttga gcaggatgag tttgatgtgt ttgtggaaga gaacagcccc
1440
attgggctag ccgtggcccg ggtcacagcc actgaccccg atgaaggcac caatgcccag
1500
attatgtacc agattgtgga gggcaacatc cctgaggtct tccagctgga catcttctcc
1560
ggggagctga cagccctggt agacttagac tacgaggacc ggccctgagta cgtcctggtc
1620
atccaggcca cgtcagctcc tctggtgagc cgggctacag tccacgtccg cctccttgac
1680
cgcaatgaca acccaccagt gctgggcaac tttagatcc ttttcaaca ctatgtcacc
1740
aatcgctcaa gcagcttccc tgggggtgcc attggccgag tacctgcccc tgaccctgat
1800
atctcagata gtctgactta cagcttttag cggggaaatg aactcagcct ggtcctgtct
1860
aatgcctcca cgggtgagct gaagctaagc cgcgcactgg acaacaaccg gcctctggag
1920
gcgctcatga gcgtgtctgt gtctgatggc atccacagcg tcacggcctt ctgcaccctg
1980
cgtgtcacca tcatcacgga cgacatgctg accaacagca tactgtccg cctggagaac
2040
atgtcccagg agaagtctct gtccccgctg ctggccctct tcgtggaggg ggtggccgcc
2100
gtgctgtcca ccaccaagga cgacgtcttc gtcttcaacg tccagaacga caccgacgtc
2160
agctccaaca tctgaacgt gaccttctcg gcgtgtctgc ctggcgccg cgcggccag
2220
ttcttcccgt cggaggacct gcaggagcag atctacctga atcggaagct gctgaccacc
2280

atctccacgc agcgcggtgct gcccttcgac gacaacatct gcctgcgcga gccctgcgag
2340
aactacatga agtgcggtgc cgttctgcga ttcgacagct ccgcgccctt cctcagctcc
2400
accaccgtgc tcttcgcggc catccacccc atcaacggcc tgcgctgcgc ctgcccgcgc
2460
ggcttcaccg gcgactactg cgagacggag atcgacctct gctactcgcg gccgtgcggc
2520
gccaacggcc gctgccgcag ccgcgagggc ggctacacct gcctctgtcg tgatggctac
2580
acgggtgagc actgtgaggt gagtgtctgc tcaggccggt gcaccccggt tgtctgcaag
2640
aatgggggca cctgtgtcaa cctgctggtg ggcggtttca agtgcgattg cccatctgga
2700
gacttcgaga agccctactg ccaggtgacc acgcgcagct tccccgccca ctcttctac
2760
acctttcgcg gcctgcgcga gcgtttccac ttcacctggt ccctctcggt tgccacaaag
2820
gagcgcgacg ggttgtgtgt gtacaatggg cgtttcaatg agaagcatga ctttgtggcc
2880
ctcgaggtga tccaggagca ggtccagctc accttctctg caggggagtc aaccaccacg
2940
gtgtcccat tctgtcccgc aggagtcagt gatggccagt ggcatacggc gcagctgaaa
3000
tactacaata agccactgtt gggtcagaca gggctccac agggcccatc agagcagaag
3060
gtggctgtgg tgaccgtgga tggctgtgac acaggagtgg ccttgcgctt cggatctgtc
3120
ctgggcaact actcctgtgc tgcccagggc acccaggggt gcagcaagaa gtctctggat
3180
ctgacggggc ccctgtact aggcgggggt cctgacctgc ccgagagctt cccagtccga
3240
atgcggcagt tctgtggctg catgcggaac ctgcaggtgg acagccggca catagacatg
3300
gctgacttca ttgccaacaa tggcaccgtg cctggctgcc ctgccaagaa gaacgtgtgt
3360
gacagcaaca cttgccacaa tgggggcact tgcgtgaacc agtgggacgc gttcagctgc
3420
gagtgcctcc tgggctttgg gggcaagagc tgcgccagg aaatggccaa tccacagcac
3480
ttcttgggca gcagcctggt ggcctggcat ggcctctcgc tgcccatctc ccaacctggt
3540
tacctcagcc tcatgttccg cagcgccag gccgacgggt tctgtctgca ggccatcacc
3600
agggggcgca gcaccatcac cctacagcta cgagagggcc acgtgatgct gagcgtggag
3660
ggcacagggc ttcaggctc ctctctcgt ctggagccag gccgggcaa tgacggtgac
3720
tggcaccatg cacagctggc actgggagcc agcggggggc ctggccatgc cattctgtcc
3780
ttcgattatg ggcagcagag agcagagggc aacctgggccc ccggtctgca tggctctcac
3840
ctgagcaaca taacagtggg cggaatacct gggccagccg gcggtgtggc ccgtggcttt
3900

cggggctgtt tgcaggtgt gcgggtgagc gatacgccag aggggggttaa cagcctggat
3960
cccagccatg gggagagcat caacgtggag caaggctgta gcctgcctga cccttgtgac
4020
tcaaaccgtg gtcctgctaa cagctattgc agcaacgact gggacagcta ttcctgcage
4080
tgtgatccag gttactatgg tgacaactgt actaatgtgt gtgacctgaa cccgtgtgag
4140
caccagtctg tgtgtaccgg caagcccagt gccccccatg gctatacctg cgagtgtccc
4200
ccaaattacc ttggggcata ctgtgagacc aggattgacc agccttgctc cctgggtgg
4260
tggggacatc ccacatgtgg cccatgcaac tgtgatgtca gcaaaggctt tgaccagac
4320
tgcaacaaga caagcggcga gtgccactgc aaggagaacc actaccggcc cccaggcagc
4380
cccacctgcc tcttgtgtga ctgctacccc acaggctcct tgtccagagt ctgtgacct
4440
gaggatggcc agtgtccatg caagccaggt gtcacgggc gtcagtgtga ccgtgtgac
4500
aacccttttg ctgaggtcac caccaatggc tgtgaagtga attatgacag ctgcccacga
4560
gcgattgagg ctgggatctg gtggccccgt acccgcttcg ggctgcctgc tegtgtctcc
4620
tgtcccaaag gtccttttgg gactgtgtgt cggcactgtg atgagcacag ggggtggctc
4680
cccccaaacc tcttcaactg cactgccatc accttctcag aactgaaggg ctctgctgag
4740
cggctacagc ggaatgagtc aggcctagac tcaggggcgt cccagcagct agccctgctc
4800
ctgcgcaacg ccacgcagca cacagctggc tacttcggca gcgacgtcaa ggtggcctac
4860
cagctggcca cgcggctgct ggcccacgag agcaccacgc ggggcttttg gctgtctgcc
4920
acacaggacg tgcacttcac tgagaatctg ctgcgggtgg gcagcgcct cctggacaca
4980
gccaacaagc ggcactggga gctgatccag cagacagagg gtggcacccg ctggctgctc
5040
cagcactatg aggcctacgc cagtgccttg gcccagaaca tgcggcacac ctacctaagc
5100
cccttcacca tcgtcacgcc caacattgtc atctccgtag tgcgcttga caaagggaac
5160
tttgctgggg ccaagctgcc ccgtacgag gccctgcgtg gggagcagcc cccggacctt
5220
gagacaacag tcattctgcc tgagtctgtc ttcagagaga cggccccctg ggtcaggccc
5280
gcaggccccg gagaggccca ggagccagag gagctggcac ggcgacagcg acggcaccg
5340
gagctgagcc aggggtgaggc tgtggccagc gtcacatct accgcacct ggccgggcta
5400
ctgcctcata actatgacct tgacaagcgc agcttgagag tcccaaacy cccgatcatc
5460
aacacaccg ttgtgagcat cagcgtccat gatgatgagg agcttctgcc ccgggccctg
5520

gacaaacccg tcacgggtgca gttccgcctg ctggagacag aggagcggac caagcccatc
5580
tgtgtcttct ggaaccattc aatcctggtc agtggcacag gtggtgtgtc ggccagaggc
5640
tgtgaagtcg tcttccgcaa tgagagccac gtcagctgcc agtgcaacca catgacgagc
5700
ttcgctgtgc tcatggacgt ttctcggcgg gagaatgggg agatcctgcc actgaagaca
5760
ctgacatacg tggctctagg tgtcaccttg gctgcccttc tgctcacctt cttcttcctc
5820
actctcttgc gtatcctgcg ctccaaccaa cacggcatcc gacgtaacct gacagctgcc
5880
ctgggcctgg ctcagctggc cttcctcctg ggaatcaacc aggetgacct cccttttgcc
5940
tgcacagtca ttgccatcct gctgcacttc ctgtacctct gcaccttttc ctgggctctg
6000
ctggaggcct tgcacctgta cggggcactc actgagggtgc gcgatgtcaa caccggcccc
6060
atgcgcttct actacatgct gggctggggc gtgcctgcct tcatcacagg gctagccgtg
6120
ggcctggacc ccgagggcta cgggaacct gacttctgct ggctctccat ctatgacacg
6180
ctcatctgga gttttgctgg cccgggtggc tttgccgtct cgatgagtgt cttcctgtac
6240
atcctggcgg cccgggcctc ctgtgctgcc cagcggcagg gctttgagaa gaaaggctcct
6300
gtctcggggc tgcagccctc cttcgccgtc ctctgctgct tgagcgccac gtggtgtgtg
6360
gcactgctct ctgtcaacag cgacaccctc ctcttcact acctctttgc tacctgcaat
6420
tgcateccagg gcccctcat cttcctctcc tatgtgtgtc ttagcaagga ggtccgga
6480
gcactcaagc ttgcctgcag ccgcaagccc agccctgacc ctgctctgac caccaagtcc
6540
acctgacct cgtcctacaa ctgccccage ccctacgcag atgggcggct gtaccagccc
6600
tacggagact cggccggctc tctgcacagc accagtcgct cgggcaagag tcagcccagc
6660
tacatccctt tcttgctgag ggaggagtcc gactgaacc ctggccaagg gccccctggc
6720
ctgggggatc caggcagcct gttcctggaa ggtcaagacc agcagcatga tcctgacacg
6780
gactccgaca gtgacctgtc cttagaagac gaccagagtg gctcctatgc ctctaccac
6840
tcatcagaca gtgaggagga agaagaggag gaggaagagg aggccgcctt ccctggagag
6900
cagggtggg atagcctgct ggggcctgga gcagagagac tgccccgca cagtactccc
6960
aaggatgggg gccagggcc tggcaaggcc ccctggccag gagactttgg gaccacagca
7020
aaagagagta gtggcaacgg gggccctgag gagcggctgc gggagaatgg agatgccctg
7080
tctcgagagg ggtccctagg cccccctcca ggctcttctg cccagcctca caaaggcatc
7140

cttaagaaga agtgtctgcc caccatcagc gagaagagca gcctcctgcg gctccccctg
7200
gagcaatgca caggggtcttc ceggggctcc tccgctagt agggcagccg gggcgcccc
7260
cctccccgcc caccgccccg gcagagcctc caggagcagc tgaacggggt catgcccac
7320
gccatgagca tcaaggcagg cacgggtgat gaggactcgt caggctccga atttctcttc
7380
tttaacttcc tgcattaacc ctggggcgtg gttcctacgc ccgaggctcc cttcccttcc
7440
ccagccgcac tcatgccctg ctctgtctt gtgctttatc ctgccccgct ccccatcgcc
7500
tgcccgagc agcgacgaaa cgtccatctg aggagcctgg gccttgccgg gaggggtact
7560
caccaccct aaggccatct agtgccaaact cccccccac cattccccctc actgcacttt
7620
ggacccctgg ggccaacatc tccaagacaa agtttttcag aaaagaggaa aaaaagaatt
7680
taaaaaagga tctccactct tcatgacttc agggattcat tttttttata cgctggaaat
7740
tgactcccc tttcccttccc aaagaggata ggacctccca ggatgcttcc cagcctctcc
7800
tcagtttccc atctgctgtg cctctgggag gagagggact cctggggggc ctgccccca
7860
tacgccatca caaaaggaa aggacaaagc cacacgcagc cagggttca cacccttcag
7920
gctgcacccg ggcaggcctc agaacggtga ggggccaggg caaagggtgt gcctcgtcct
7980
gcccgcactg cctctcccag gaactggaaa agccctgtcc ggtgaggggg cagaaggact
8040
cagcgcctt ggacccccaa atgctgcatg aacacatttt caggggagcc tgtgccccca
8100
ggcggggggtc gggcagcccc agccctctc cttttcctgg actctggccg tgcgcggcag
8160
cccaggtgtt tgctcagttg ctgacccaaa agtgcttcat tttctgtgcc cgcgccgcg
8220
cccgggcagg ccagtcattg gttaagtgtc gcttctttgc tgtgatgtgg gtgggggagg
8280
aagagtaaac acagtgtgtg ctcggtgcc ctgagggtgc tcaatcaagc acaggtttca
8340
agtctgggtt ctgggtgtcca ctcaccacc ccacccccca aaatcagaca atgctactt
8400
tgtctaacct gctgtggcct ctgagacatg ttctattttt aaccccttct tggatttgc
8460
tctcttcttc aaaggaccag gtcctgttcc tctttctccc cgactccacc ccagctccct
8520
gtgaagagag agttaatata tttgttttat ttatttgctt tttgcgttg gatgggttcg
8580
tgtccagtcc cgggggtctg atatggccat cacaggctgg gtgttcccag cagccctggc
8640
ttgggggctt gacgcccttc cccttgcccc aggccatcat ctccccacct ctctccct
8700
ctcctcagtt ttgccgactg cttttcatct gagtcacat ttactccaag catgtattcc
8760

agacttgatc ctgactttcc ttctggagca ggtggctaga aaaagaggct gtgggcagga
 8820
 aagaaaggct cctgtttctc atttgtgagg ccagcctctg gcttttctgc cgtggattct
 8880
 cccctctgtc tctccctca gcaattcctg caaagggtta aaaatttaac tggtttttac
 8940
 tactgatgac ttgatttaaa aaaaatacaa agatgctgga tgctaacttg atactaacca
 9000
 tcagattgta cagtttggtt gttgctgtaa atatggtagc gttttgttgt tgttgttttt
 9060
 tcatgccccca tactactgaa taaactagtt ctgtgcgggt acaaaaaaaaa aaaaaaaaaa
 9120
 a
 9121

<210> 3912

<211> 2405

<212> PRT

<213> Homo sapiens

<400> 3912

Glu	Ser	Val	Pro	Leu	Gly	Tyr	Leu	Val	Leu	His	Val	Gln	Ala	Ile	Asp
1				5					10					15	
Ala	Asp	Ala	Gly	Asp	Asn	Ala	Arg	Leu	Glu	Tyr	Arg	Leu	Ala	Gly	Val
			20					25					30		
Gly	His	Asp	Phe	Pro	Phe	Thr	Ile	Asn	Asn	Gly	Thr	Gly	Trp	Ile	Ser
			35				40					45			
Val	Ala	Ala	Glu	Leu	Asp	Arg	Glu	Glu	Val	Asp	Phe	Tyr	Ser	Phe	Gly
			50				55				60				
Val	Glu	Ala	Arg	Asp	His	Gly	Thr	Pro	Ala	Leu	Thr	Ala	Ser	Ala	Ser
65					70					75				80	
Val	Ser	Val	Thr	Val	Leu	Asp	Val	Asn	Asp	Asn	Asn	Pro	Thr	Phe	Thr
				85						90				95	
Gln	Pro	Glu	Tyr	Thr	Val	Arg	Leu	Asn	Glu	Asp	Ala	Ala	Val	Gly	Thr
				100				105					110		
Ser	Val	Val	Thr	Val	Ser	Ala	Val	Asp	Arg	Asp	Ala	His	Ser	Val	Ile
				115				120				125			
Thr	Tyr	Gln	Ile	Thr	Ser	Gly	Asn	Thr	Arg	Asn	Arg	Phe	Ser	Ile	Thr
				130			135				140				
Ser	Gln	Ser	Gly	Gly	Gly	Leu	Val	Ser	Leu	Ala	Leu	Pro	Leu	Asp	Tyr
145					150					155				160	
Lys	Leu	Glu	Arg	Gln	Tyr	Val	Leu	Ala	Val	Thr	Ala	Ser	Asp	Gly	Thr
				165						170				175	
Arg	Gln	Asp	Thr	Ala	Gln	Ile	Val	Val	Asn	Val	Thr	Asp	Ala	Asn	Thr
				180					185				190		
His	Arg	Pro	Val	Phe	Gln	Ser	Ser	His	Tyr	Thr	Val	Asn	Val	Asn	Glu
				195				200				205			
Asp	Arg	Pro	Ala	Gly	Thr	Thr	Val	Val	Leu	Ile	Ser	Ala	Thr	Asp	Glu
				210								220			
Asp	Thr	Gly	Glu	Asn	Ala	Arg	Ile	Thr	Tyr	Phe	Met	Glu	Asp	Ser	Ile
225					230					235				240	
Pro	Gln	Phe	Arg	Ile	Asp	Ala	Asp	Thr	Gly	Ala	Val	Thr	Thr	Gln	Ala
				245						250				255	
Glu	Leu	Asp	Tyr	Glu	Asp	Gln	Val	Ser	Tyr	Thr	Leu	Ala	Ile	Thr	Ala

260	265	270
Arg Asp Asn Gly Ile Pro Gln Lys Ser Asp Thr Thr Tyr Leu Glu Ile		
275	280	285
Leu Val Asn Asp Val Asn Asp Asn Ala Pro Gln Phe Leu Arg Asp Ser		
290	295	300
Tyr Gln Gly Ser Val Tyr Glu Asp Val Pro Pro Phe Thr Ser Val Leu		
305	310	315
Gln Ile Ser Ala Thr Asp Arg Asp Ser Gly Leu Asn Gly Arg Val Phe		
325	330	335
Tyr Thr Phe Gln Gly Gly Asp Asp Gly Asp Gly Asp Phe Ile Val Glu		
340	345	350
Ser Thr Ser Gly Ile Val Arg Thr Leu Arg Arg Leu Asp Arg Glu Asn		
355	360	365
Val Ala Gln Tyr Val Leu Arg Ala Tyr Ala Val Asp Lys Gly Met Pro		
370	375	380
Pro Ala Arg Thr Pro Met Glu Val Thr Val Thr Val Leu Asp Val Asn		
385	390	395
Asp Asn Pro Pro Val Phe Glu Gln Asp Glu Phe Asp Val Phe Val Glu		
405	410	415
Glu Asn Ser Pro Ile Gly Leu Ala Val Ala Arg Val Thr Ala Thr Asp		
420	425	430
Pro Asp Glu Gly Thr Asn Ala Gln Ile Met Tyr Gln Ile Val Glu Gly		
435	440	445
Asn Ile Pro Glu Val Phe Gln Leu Asp Ile Phe Ser Gly Glu Leu Thr		
450	455	460
Ala Leu Val Asp Leu Asp Tyr Glu Asp Arg Pro Glu Tyr Val Leu Val		
465	470	475
Ile Gln Ala Thr Ser Ala Pro Leu Val Ser Arg Ala Thr Val His Val		
485	490	495
Arg Leu Leu Asp Arg Asn Asp Asn Pro Pro Val Leu Gly Asn Phe Glu		
500	505	510
Ile Leu Phe Asn Asn Tyr Val Thr Asn Arg Ser Ser Ser Phe Pro Gly		
515	520	525
Gly Ala Ile Gly Arg Val Pro Ala His Asp Pro Asp Ile Ser Asp Ser		
530	535	540
Leu Thr Tyr Ser Phe Glu Arg Gly Asn Glu Leu Ser Leu Val Leu Leu		
545	550	555
Asn Ala Ser Thr Gly Glu Leu Lys Leu Ser Arg Ala Leu Asp Asn Asn		
565	570	575
Arg Pro Leu Glu Ala Leu Met Ser Val Ser Val Ser Asp Gly Ile His		
580	585	590
Ser Val Thr Ala Phe Cys Thr Leu Arg Val Thr Ile Ile Thr Asp Asp		
595	600	605
Met Leu Thr Asn Ser Ile Thr Val Arg Leu Glu Asn Met Ser Gln Glu		
610	615	620
Lys Phe Leu Ser Pro Leu Leu Ala Leu Phe Val Glu Gly Val Ala Ala		
625	630	635
Val Leu Ser Thr Thr Lys Asp Asp Val Phe Val Phe Asn Val Gln Asn		
645	650	655
Asp Thr Asp Val Ser Ser Asn Ile Leu Asn Val Thr Phe Ser Ala Leu		
660	665	670
Leu Pro Gly Gly Val Arg Gly Gln Phe Phe Pro Ser Glu Asp Leu Gln		
675	680	685
Glu Gln Ile Tyr Leu Asn Arg Thr Leu Leu Thr Thr Ile Ser Thr Gln		

690	695	700
Arg Val Leu Pro Phe Asp Asp Asn Ile Cys Leu Arg Glu Pro Cys Glu		
705	710	715
Asn Tyr Met Lys Cys Val Ser Val Leu Arg Phe Asp Ser Ser Ala Pro		720
	725	730
Phe Leu Ser Ser Thr Thr Val Leu Phe Arg Pro Ile His Pro Ile Asn		735
	740	745
Gly Leu Arg Cys Arg Cys Pro Pro Gly Phe Thr Gly Asp Tyr Cys Glu		750
	755	760
Thr Glu Ile Asp Leu Cys Tyr Ser Arg Pro Cys Gly Ala Asn Gly Arg		765
	770	775
Cys Arg Ser Arg Glu Gly Gly Tyr Thr Cys Leu Cys Arg Asp Gly Tyr		780
	785	790
Thr Gly Glu His Cys Glu Val Ser Ala Arg Ser Gly Arg Cys Thr Pro		795
	800	805
Gly Val Cys Lys Asn Gly Gly Thr Cys Val Asn Leu Leu Val Gly Gly		810
	815	820
Phe Lys Cys Asp Cys Pro Ser Gly Asp Phe Glu Lys Pro Tyr Cys Gln		825
	830	835
Val Thr Thr Arg Ser Phe Pro Ala His Ser Phe Ile Thr Phe Arg Gly		840
	845	850
Leu Arg Gln Arg Phe His Phe Thr Leu Ala Leu Ser Phe Ala Thr Lys		855
	860	865
Glu Arg Asp Gly Leu Leu Leu Tyr Asn Gly Arg Phe Asn Glu Lys His		870
	875	880
Asp Phe Val Ala Leu Glu Val Ile Gln Glu Gln Val Gln Leu Thr Phe		885
	890	895
Ser Ala Gly Glu Ser Thr Thr Thr Val Ser Pro Phe Val Pro Gly Gly		900
	905	910
Val Ser Asp Gly Gln Trp His Thr Val Gln Leu Lys Tyr Tyr Asn Lys		915
	920	925
Pro Leu Leu Gly Gln Thr Gly Leu Pro Gln Gly Pro Ser Glu Gln Lys		930
	935	940
Val Ala Val Val Thr Val Asp Gly Cys Asp Thr Gly Val Ala Leu Arg		945
	950	955
Phe Gly Ser Val Leu Gly Asn Tyr Ser Cys Ala Ala Gln Gly Thr Gln		960
	965	970
Gly Gly Ser Lys Lys Ser Leu Asp Leu Thr Gly Pro Leu Leu Leu Gly		975
	980	985
Gly Val Pro Asp Leu Pro Glu Ser Phe Pro Val Arg Met Arg Gln Phe		990
	995	1000
Val Gly Cys Met Arg Asn Leu Gln Val Asp Ser Arg His Ile Asp Met		1005
	1010	1015
Ala Asp Phe Ile Ala Asn Asn Gly Thr Val Pro Gly Cys Pro Ala Lys		1020
	1025	1030
Lys Asn Val Cys Asp Ser Asn Thr Cys His Asn Gly Gly Thr Cys Val		1035
	1040	1045
Asn Gln Trp Asp Ala Phe Ser Cys Glu Cys Pro Leu Gly Phe Gly Gly		1050
	1055	1060
Lys Ser Cys Ala Gln Glu Met Ala Asn Pro Gln His Phe Leu Gly Ser		1065
	1070	1075
Ser Leu Val Ala Trp His Gly Leu Ser Leu Pro Ile Ser Gln Pro Trp		1080
	1085	1090
Tyr Leu Ser Leu Met Phe Arg Thr Arg Gln Ala Asp Gly Val Leu Leu		1095
	1100	1105
	1110	1115
	1120	